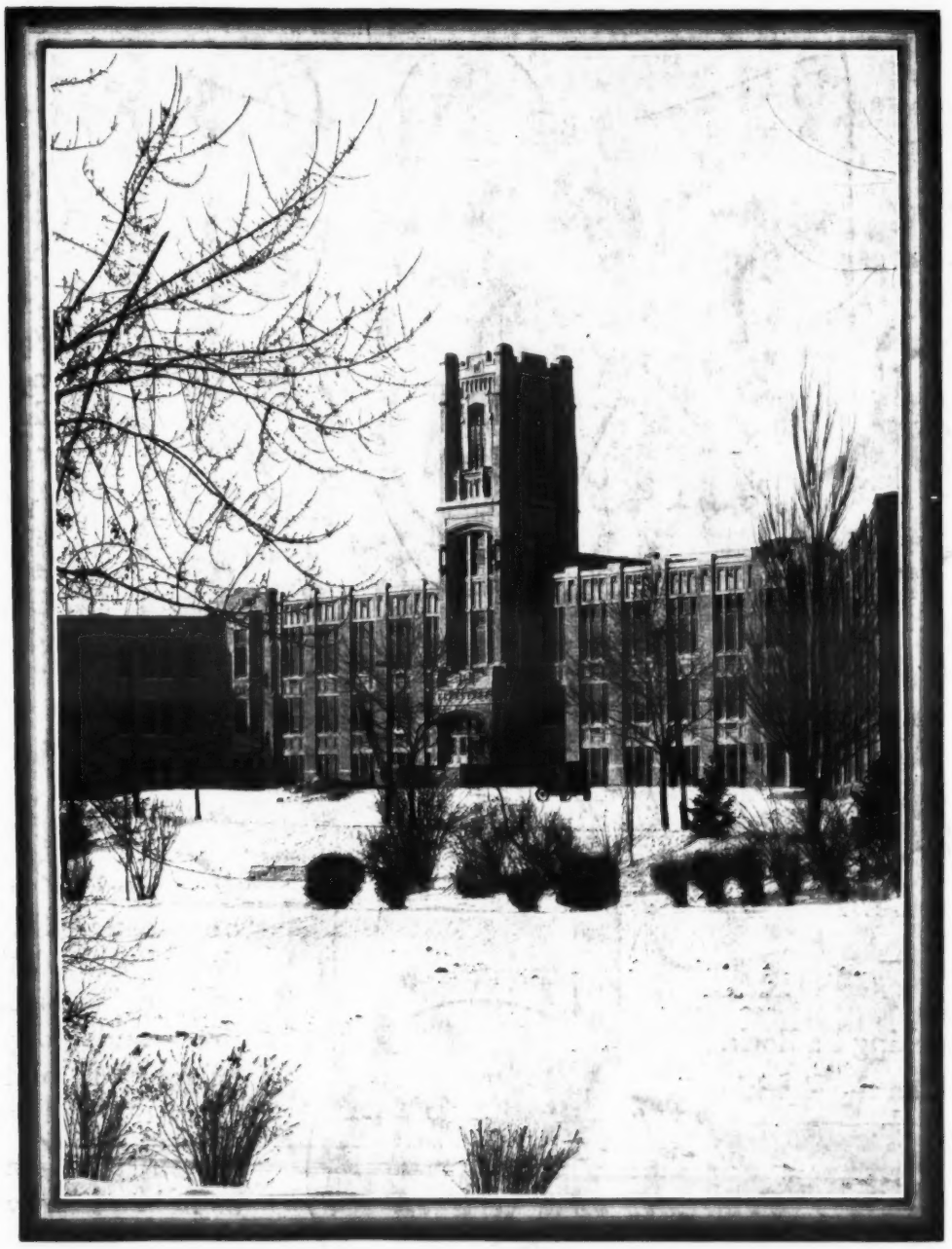
FEB 2 19

THE AMERICAN
School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION



February, 1931

THE BRUCE PUBLISHING COMPANY

New York MILWAUKEE, WIS. Chicago

NOW!

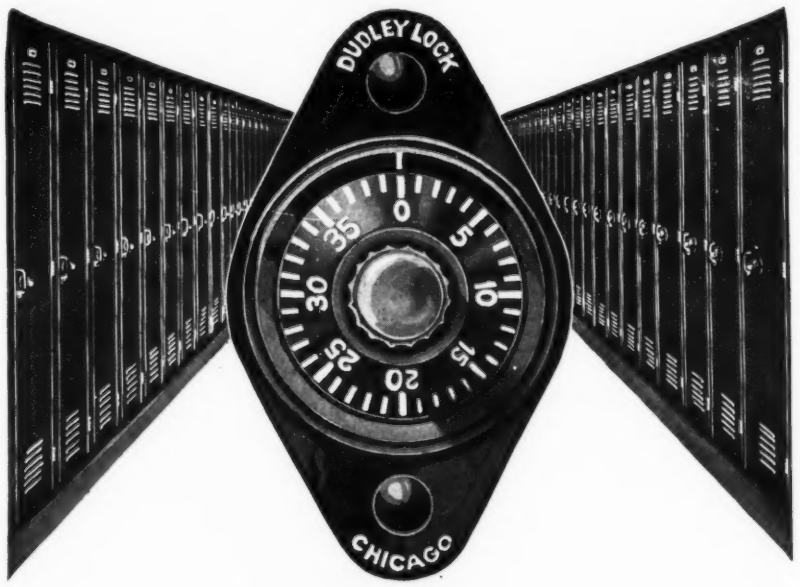
The New Dudley Self-Locking Door

OBSOLETES ALL PREVIOUS LOCKER CONCEPTIONS!

3 seconds—3 movements—a pull—it's open—one hand does it all.
Close the door—and it's automatically locked.

Not just an improvement or refinement but a radically new product — a keyless self-locking locker door — the result of 10 years' experience specializing in locker locks.

Built for the progressive executive who knows the worth of efficiency.



Leading locker manufacturers are now prepared to furnish lockers equipped with Dudley Keyless Locker Doors upon your specification.

Specify and insist on the new Dudley self-locking door when buying your new locker equipment.

YOUR SCHOOL DESERVES THE BEST!

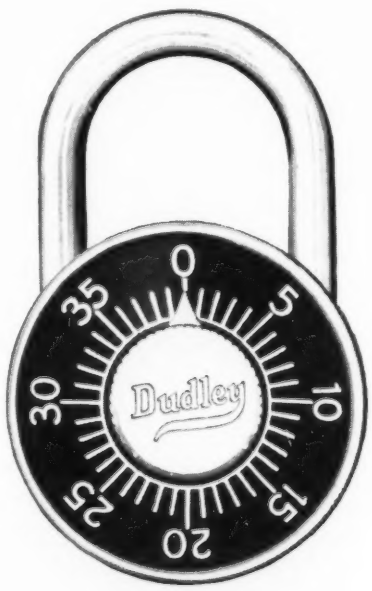
HERE IS THE EFFICIENT LOCKER SYSTEM THAT PERMANENTLY SOLVES YOUR MOST SERIOUS PROBLEM IN SCHOOL ADMINISTRATION. GLANCE DOWN YOUR CORRIDOR—IF THE LOCKER DOORS ARE CLOSED YOU KNOW THEY ARE LOCKED. YOUR INSPECTION IS INSTANTANEOUS AND POSITIVE.

ANOTHER DUDLEY ACHIEVEMENT—

The new Dudley Self-Locking Padlock.

It automatically locks when the shackle is pushed into the lock case.

WHEN IT'S CLOSED IT'S LOCKED!



Send Today for complete information on the new SL-2 Dudley self-locking door lock and the new S-2 B Dudley self-locking padlock. Both are pick-proof and fool-proof in every respect, affording absolute locker security. Both carry the famous Dudley guarantee.

If you still have a locker problem, let us help you solve it—permanently.

Write us today.

Dudley Keyless Lock

DUDLEY LOCK CORPORATION

26 N. Franklin Street

DEPT. A-12

CHICAGO

MEMBER ASSOCIATED ADVERTISERS EDUCATIONAL THE NATIONAL ASSN.

VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO, ILL.

"Pyramid" Natural Slate Blackboards specified by Paul Gerhardt, City Architect

. . . If there is one piece of equipment in a school building that should not be replaced, it is the blackboard. Tearing boards down during the school season disrupts even the best and ghly organized school. Doing the same job during vacation may be more convenient but no less expensive . . . Every blackboard worth considering should outlast d building. A ten year guarantee not only is insufficient, but ridiculous ally when architects and school executives are erecting the finest schools a buildings in the history of our country . . . Your school should have the very best ty blackboards obtainable, for the first cost is the only cost . . . A "Pyramid" Natural S Blackboard, with its velvet black writing surface, is easy to write on and easy to read. Consult your architect. You may be sure his advice will be your gain . . . A complete set of interesting books on this most important subject will be gladly sent upon request. You will profit by the information they contain . . .

They Outlast the Building

CENTURIES OF SERVICE
PYRAMID NATURAL SLATE BLACKBOARDS
Proof against Time - Wear - Water - Fire!

NATURAL SLATE BLACKBOARD COMPANY

Pen Argyl, Pennsylvania

SEE OUR CATALOGUE IN SWEET'S

Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Most Important Thing

No Von Duprin device, anywhere, has ever failed to operate in an emergency.

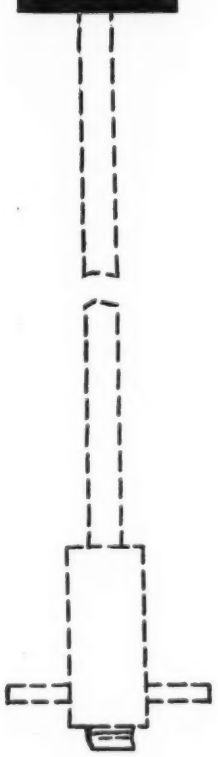
This point has been repeated so frequently and stressed so strongly because we believe it is the most important thing for the buyer to know - - - and for us to remember.

Panic devices, to be of value, must be built to meet the terrific demands of emergencies, when many lives are staked on their proper operation. Their convenience in every-day use is a by-product of the main purpose.

Von Duprin devices are built to stand up under the wear and tear of daily use and still have the reserve strength to withstand emergency operation. They are strong, rugged, dependable.

We submit that no device less well built is good enough.

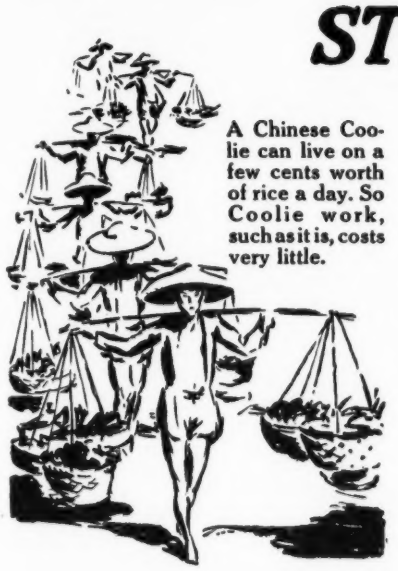
So we again repeat that no Von Duprin device, anywhere, has ever failed to operate in an emergency.



VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters' Laboratories

KEWANEE STEEL BOILERS

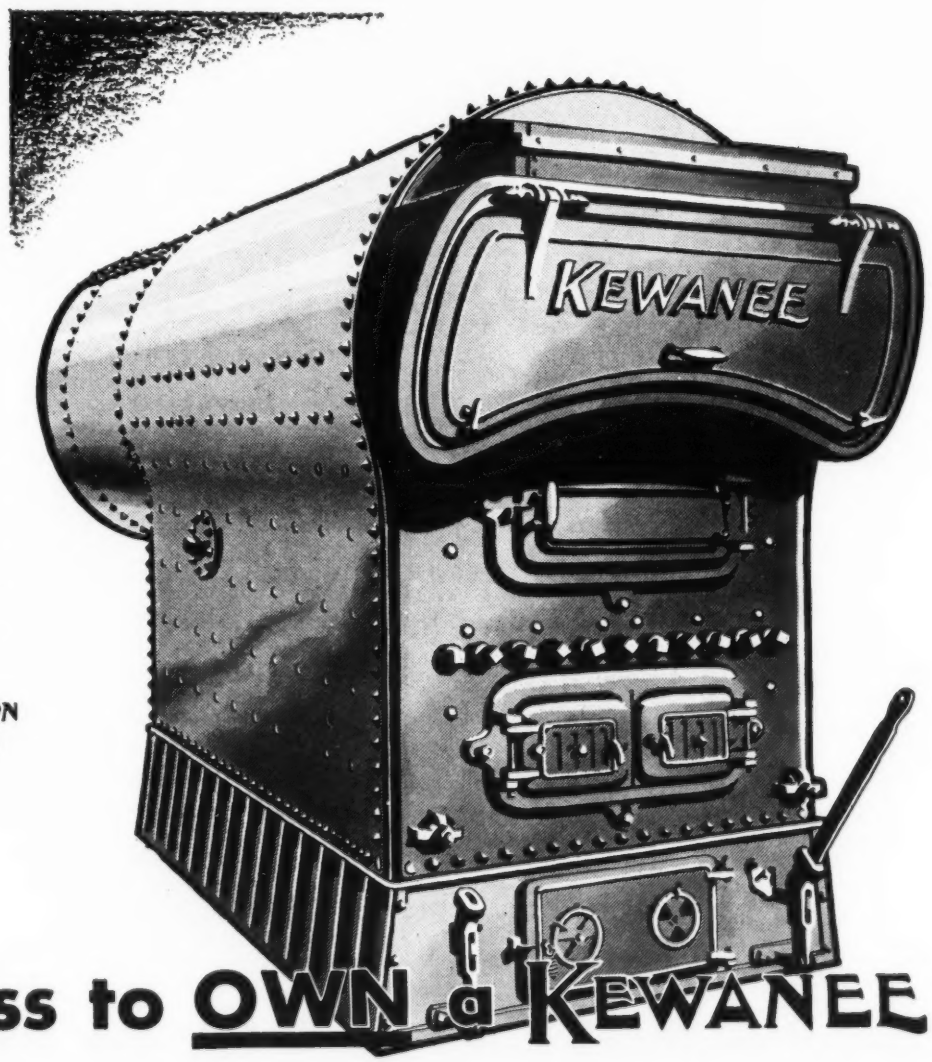


A Chinese Coolie can live on a few cents worth of rice a day. So Coolie work, such as it is, costs very little.

A Kewanee Smokeless Boiler, designed and built by American workmen according to American standards, burns the lowest priced coals (even screenings); and does it very thoroughly. It *lives* on cheap coal yet produces a maximum amount of heat.

This *every day fuel saving*; plus sturdy steel construction which adds many extra years to the life of a Kewanee; brings its actual cost down to a point that makes it a preferred investment.

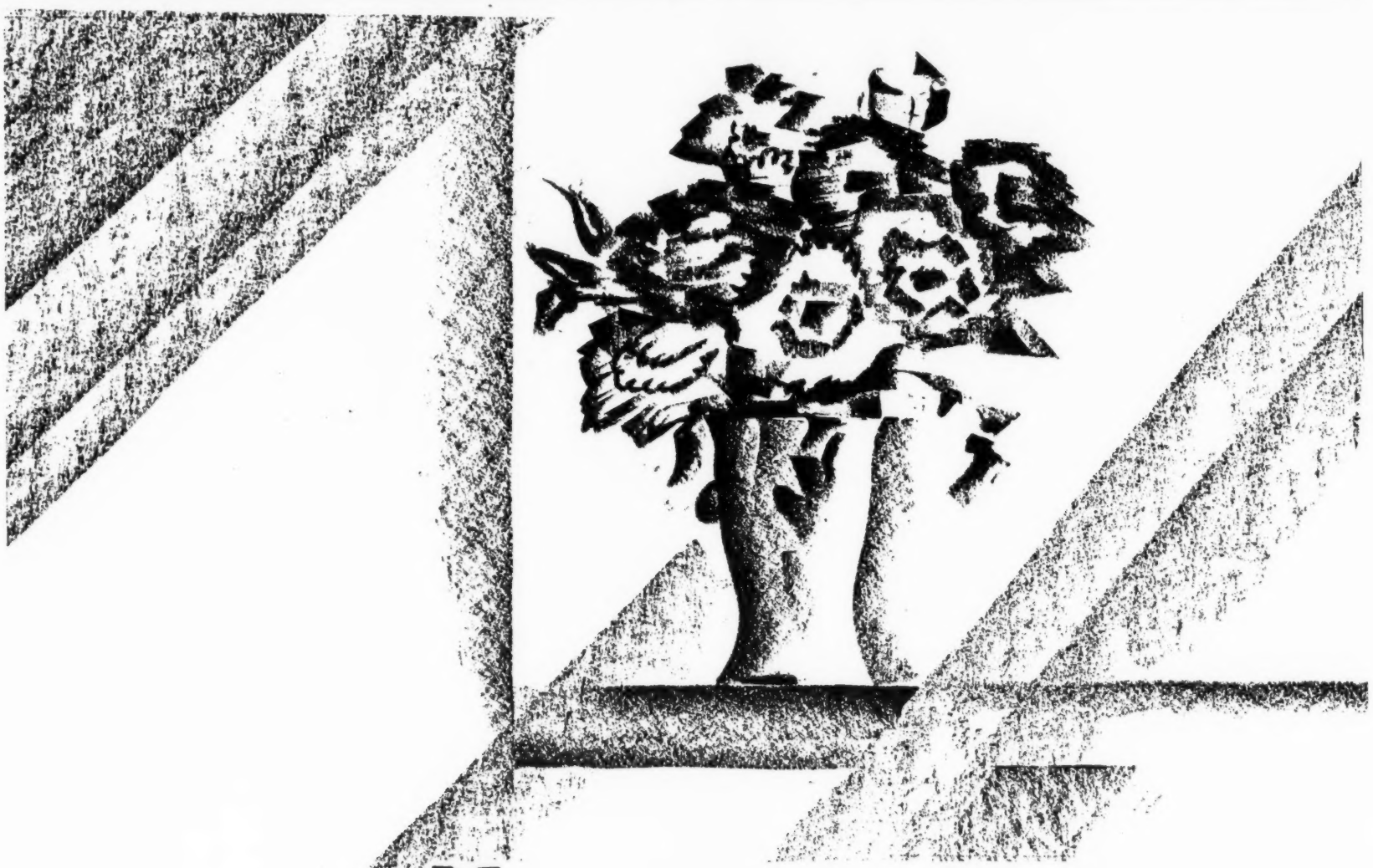
If the fuel supply in your city *is* a problem, investigate the advantages of a Kewanee Smokeless before making a boiler selection.



KEWANEE BOILER CORPORATION
division of American Radiator & Standard Sanitary Corporation
KEWANEE, ILLINOIS
Branches in Principal Cities

MEMBER OF
STEEL HEATING BOILER INSTITUTE

It Costs Less to OWN a KEWANEE



You can't keep dust out of a school . . .

It is tracked in—comes in through windows and is produced in volumes by blackboards and other normal school activities.

But you can remove dirt and dust soon as it arrives.

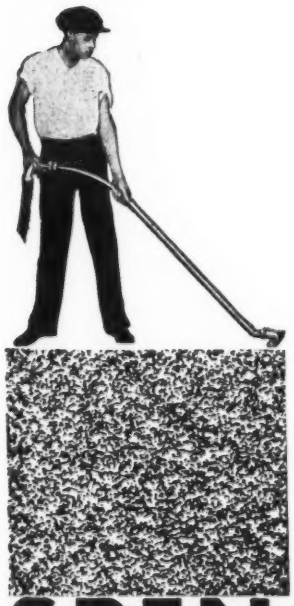
The Spencer System

cleans the main avenues of travel quietly and quickly during the opening exercises.

The biggest cause of dust is thus removed at its source. Rooms are cleaned while vacant or between periods if necessary and the whole school is given a perfect cleaning every day without heavy labor costs.

The Spencer System is not only the most economical method of cleaning; it is the only method that will clean thoroughly according to tests made by experts in school cleaning and maintenance.

Let us send you the Bulletin and a list of Spencer Equipped Schools.



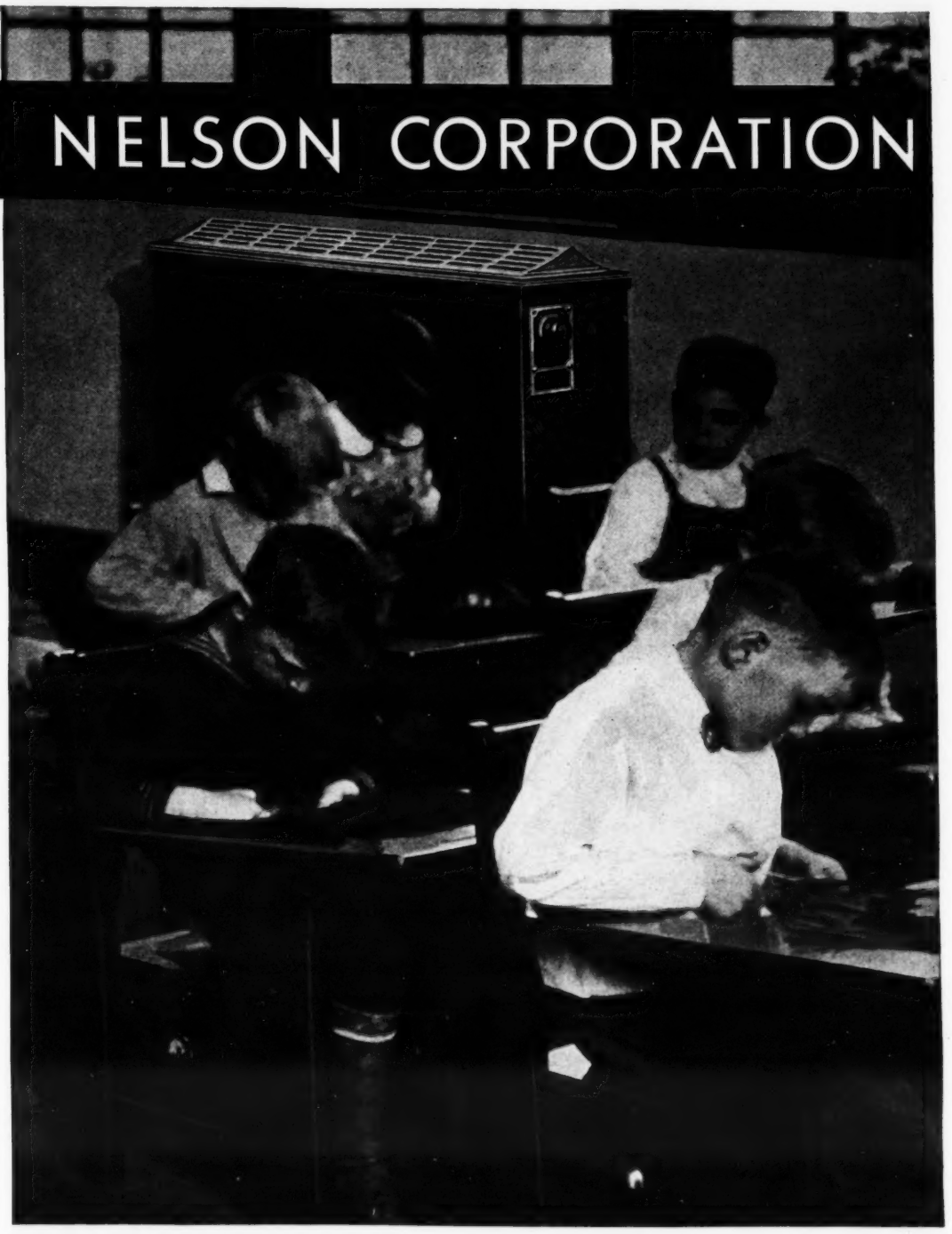
The Spencer Turbine Company, Hartford, Conn.

SPENCER CENTRAL CLEANING SYSTEM

3394

© 1931
T. H. N. Corp.

THE HERMAN NELSON CORPORATION



HERMAN NELSON

HER-NEL-CO

SYSTEM OF VENTILATION

Good ventilation stripped of its high costs has long been sought by school authorities, and health authorities. Today such ventilation is offered.

The Herman Nelson Her-Nel-Co System of Ventilation offers good ventilation at a definite reduction in building and maintenance costs, and a saving of half the fuel costs. This means a saving of millions of dollars to tax payers.

Science has long recognized that the vital factors of good ventilation are: air motion, temperature, and humidity.

The Her-Nel-Co Ventilator controls these factors without the expensive expedient of using a convenient stream of outdoor air. In fact, outdoor air is only used when necessary and in an amount required to remove excess heat or body odor. Such outdoor air when admitted is tempered by intermixture with indoor air, but is not preheated.

School authorities are invited to write for the book "The Herman Nelson Her-Nel-Co System of Ventilation," which shows how simply and effectively it offers full ventilation results with saving in building costs, boiler costs, and fuel costs.

The Herman Nelson Corporation are makers of the *Univent System of Ventilation*, the *Her-Nel-Co System of Ventilation*, the *Herman Nelson Invisible Radiator*, the *Herman Nelson hiJet Heater*, and other heating and ventilating equipment.

A HERMAN NELSON PRODUCT

Factory at Moline, Illinois • ***Sales and Service Offices in all Principal Cities***

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ERIE, PA.
WHEELING, W. VA.
WASHINGTON, D. C.
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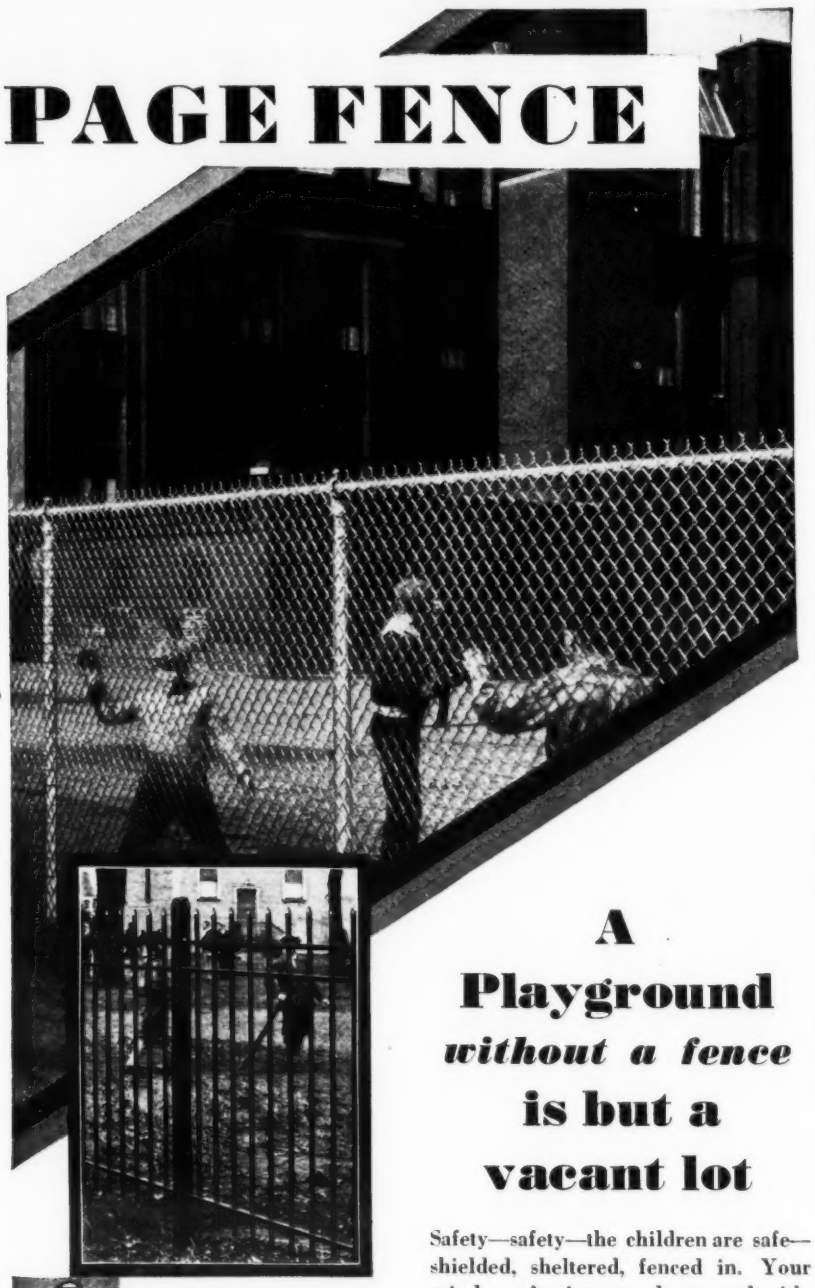
TOKIO, OSAKA
BUENOS AIRES

PAGE FENCE



A Playground *without a fence* is but a vacant lot

Safety—safety—the children are safe—shielded, sheltered, fenced in. Your mind won't picture a playground without a fence or a schoolyard or that portion of public parks set aside for the little folks.

And what punishment that fence must stand! Is it any wonder PAGE has spent a half-century developing fence durability!

PAGE specializes in Park, Playground and School fencing in four fine metals to combat differing local atmospheric conditions—

1. PAGE ALCOA ALUMINUM
2. PAGE ARMCO INGOT IRON
3. PAGE COPPER-BEARING STEEL
4. PAGE ORNAMENTAL WROUGHT IRON

76 Service Plants erect PAGE Fence everywhere. Write for name and address of Plant in your locality. They will gladly consult with you and offer suggestions from plans to final erection. No obligation whatever. Complete descriptive literature on request. Address Page Fence Association, 520 North Michigan Avenue, Dept. E58, Chicago, Illinois.

PAGE H-Beam Line Posts of hot galvanized high carbon steel offer distinct advantages, but tubular posts are furnished where preferred.

America's first wire fence since 1883

PAGE STEEL AND WIRE QUALITY PRODUCTS

PAGE FENCE

nation-wide service through 76 service plants

ARMCO

Fence of Armco Ingot Iron fabric is exclusive with Page

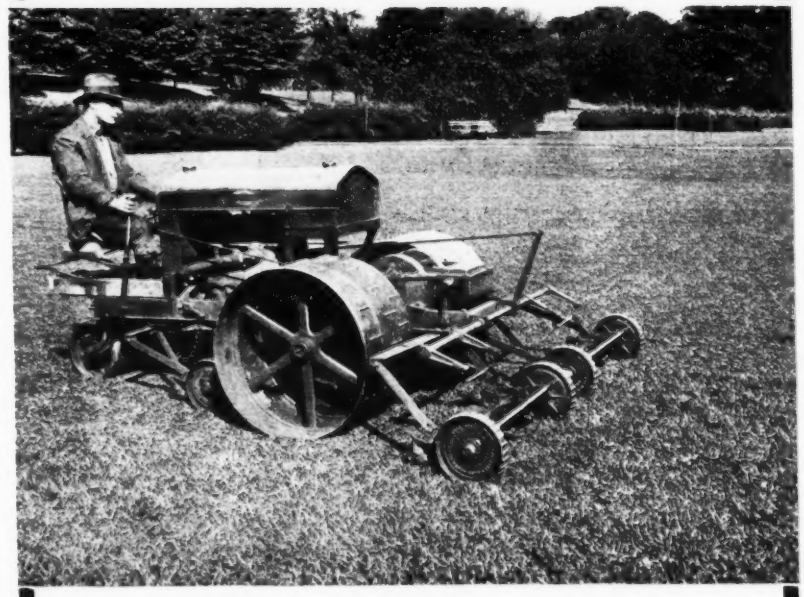
Page Fence is a Product of The Page Steel & Wire Co., an Associate Company of American Chain Co., Inc.

ACCO

CHAIN LINK OR ORNAMENTAL WROUGHT IRON

Agile AS A Hand Mower

The Triplex Covers 35 Acres Per Day



Due to the fact that most school and university grounds are well foliaged, and cover a considerable acreage, the famous Triplex mower can generally repay its cost by the great yearly saving in labor costs.

There is no other mower like the Triplex. This remarkable, big capacity machine rounds trees and bushes without hesitation. It cuts right to the edge of wall or walk. In a tight corner, it backs up and turns in its own length. At a roadway, it picks up its cutting units and crosses — to put them down when needed. (Some schools use their Triplex, with a special attachment, as a snow plow in the winter!)

To see this work-hungry mower perform at the touch of a lever, is to see something remarkable in the development of high-efficiency grass cutting implements. Ask for the details—no obligation.

IDEAL POWER LAWN MOWER CO.
435 Kalamazoo St., Lansing, Mich.
Factory Branches

413 W. Chicago Ave., Chicago, Ill.
161 Vester St., Ferndale (Detroit), Mich.
237 Lafayette St., New York City.
273 Boylston St., Brookline, Mass.

Dealers in all principal cities

• IDEAL •

GRASS CUTTING EQUIPMENT

ST. MARY'S ACADEMY

ST. FRANCIS, WISCONSIN

The Johnson Dual Two Temperature System of Heat & Humidity Control is installed in the gymnasium, auditorium, natatorium and dormitory sections of this new school building. Each one of these sections of the building is provided with a separate dual switch so that any section may be operated automatically at dual (one temperature for day, a lower temperature for night) or continually at day temperature, as desired in any department. The installation consists of 29 dual type room thermostats, operating 71 sylphon radiator valves. In addition to this room control, the temperature and the humidity of the air furnished by 2 ventilating systems is Johnson Controlled. And 7 Johnson pneumatically operated switches control the fresh air and foul air dampers in the building . . . E. Brielmaier & Sons Co., Milwaukee, Wisconsin, Architects.

JOHNSON SERVICE COMPANY

Established 1885

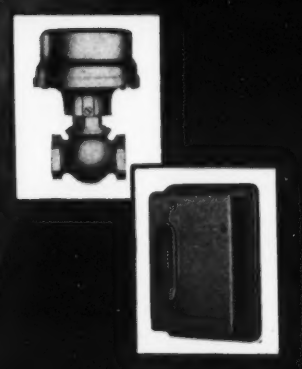
MILWAUKEE, WISCONSIN.

Albany	Des Moines	Portland
Atlanta	Detroit	St. Louis
Baltimore	Greensboro, N. C.	Salt Lake City
Boston	Indianapolis	San Francisco
Buffalo	Kansas City	Seattle
Chicago	Los Angeles	Calgary, Alta.
Cincinnati	Minneapolis	Montreal, Que.
Cleveland	New York	Winnipeg, Man.
Dallas	Philadelphia	Toronto, Ont.
Denver	Pittsburgh	Vancouver, B. C.

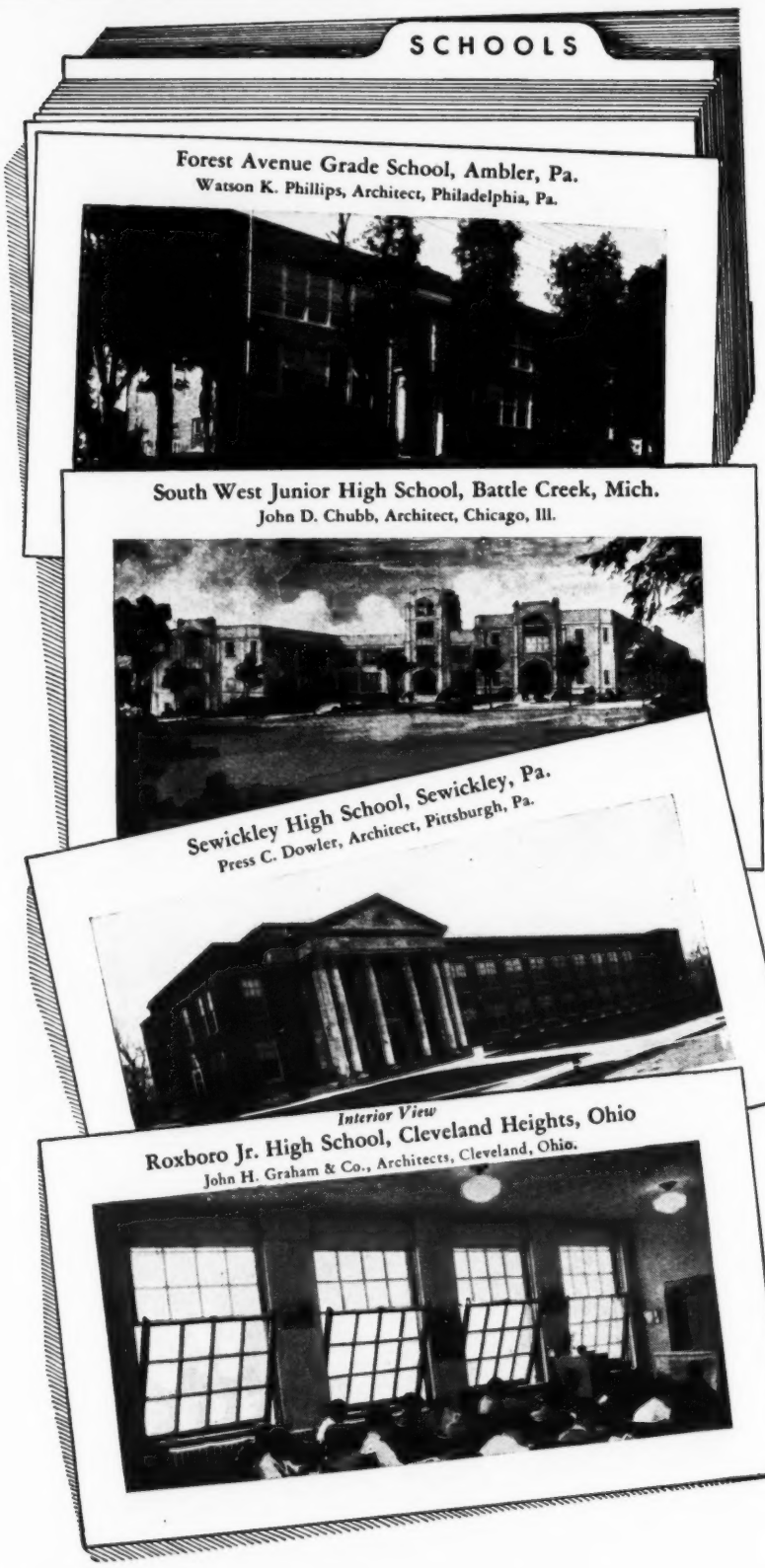
SERVICE

Each Johnson Installation Made By Johnson Mechanics Only. Every Johnson Installation Inspected Annually Without Charge. . . . 30 Convenient Johnson Branches Insures Emergency Attention Within 24 Hours Anywhere.

The All-Metal System. The All-Perfect Graduated Control of Valves and Dampers. The Dual Thermostat (Night & Day) Control: Fuel Saving 25 to 40 per cent per year.



JOHNSON HEAT AND HUMIDITY CONTROL


SCHOOLS
Forest Avenue Grade School, Ambler, Pa.
Watson K. Phillips, Architect, Philadelphia, Pa.
South West Junior High School, Battle Creek, Mich.
John D. Chubb, Architect, Chicago, Ill.
Sewickley High School, Sewickley, Pa.
Press C. Dowler, Architect, Pittsburgh, Pa.
Interior View
Roxboro Jr. High School, Cleveland Heights, Ohio
John H. Graham & Co., Architects, Cleveland, Ohio.

Modern Requirements for Classroom Windows

DRAFTLESS ventilation, weather-tight construction, ease in operation, good shading facilities, and reversibility for safe and inside window cleaning—these are the essentials in modern classroom windows.

Williams Reversible Window Fixtures afford these advantages at a cost very little more than for the ordinary window. Ask your architect to explain this modern schoolroom equipment.

You are cordially invited to visit our exhibit at the N. E. A. Convention — Booth 357.

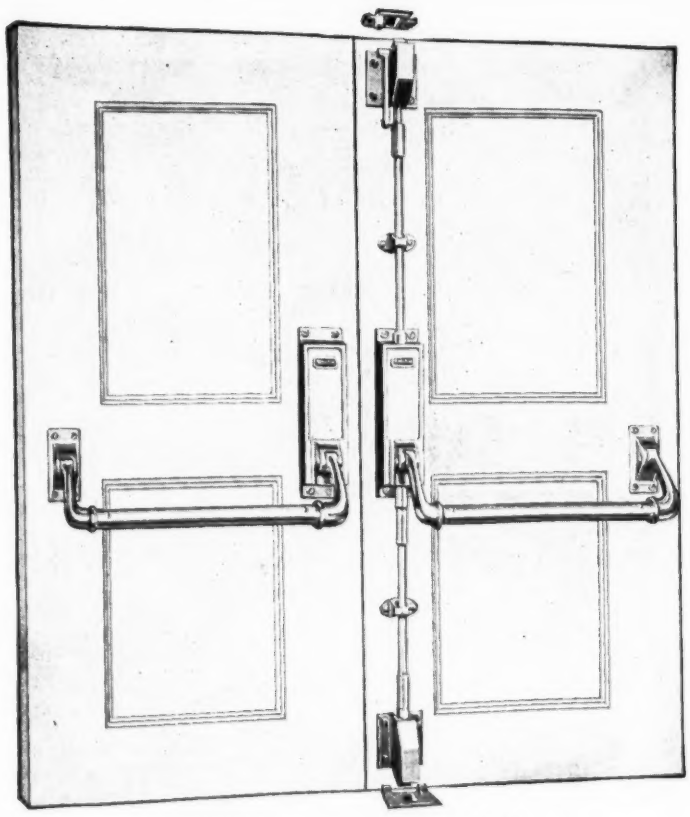
THE WILLIAMS PIVOT SASH COMPANY
East 37th St. at Perkins Ave., Cleveland, Ohio
For 27 years manufacturers and installers of Reversible Window Equipment.

WILLIAMS REVERSIBLE WINDOW EQUIPMENT
Clean Your Windows from the Inside

SMITH'S IMPROVED PANIC EXIT LOCKS

NO. 80 LINE

Gravity Panic Exit Bolts



Inside View Has Outside Trim. *Inside View No Outside Trim.*

Bolts are operated by a slight pressure on the Cross Bar.

Bolts are not dependent on springs for opening or closing operation.

Simple but sturdy in construction and easily installed.

Will operate perfectly in connection with standard makes of door closers.

Catalogue No. 30 with Supplement "A" sent on request.

Manufactured by

THE STEFFENS-AMBERG CO.
260-270 Morris Ave.
NEWARK, N. J.

LOOK *"under the hood"* OF YOUR WINDOW SHADES, TOO

Are automobiles all on a par? . . . *Neither are window shades.* In shades, as in cars, there are great mechanical differences.

Look "under the hood" when you buy shades . . . look critically into the roller. And above all see a *Columbia* roller. In all shadedom there is no other engine to compare with this one.

No other will perform so well nor last so long. No other is so quick to respond . . . so smooth in action . . . so *quiet.* No other has the extra-powered spring . . . the balance born of power in reserve. No other has the semi-covered end . . . a protection against dust and ravelings. It is a matchless roller.

And *Columbia* makes matchless shade cloth to complement its service. Shadings of all kinds. Each the finest of its kind . . . *No other shade will cost you so little per month of usefulness as a Columbia shade.* Look "under the hood" for the reasons!

Columbia

WINDOW SHADES

Rollers . Venetian Blinds

THE *Columbia* MILLS, Inc., 225 Fifth Avenue, New York · *Branches:* Baltimore · Boston · Chicago · Cincinnati · Cleveland · Dallas · Denver · Detroit Fresno · Kansas City, Mo. · Los Angeles · Minneapolis · New Orleans · Philadelphia · Pittsburgh · Portland, Ore. · St. Louis · Salt Lake City · San Francisco · Seattle

WAY PAST THE DAYS
of the Old Tin Cup

Many vital improvements have been made in drinking methods, but, heading the list is the R-S Vertico-Slant Sanitary Fountain.

This fountain never feels the touch of contaminated mouths and lips. It prevents them from even coming close to the jet that spouts the water.

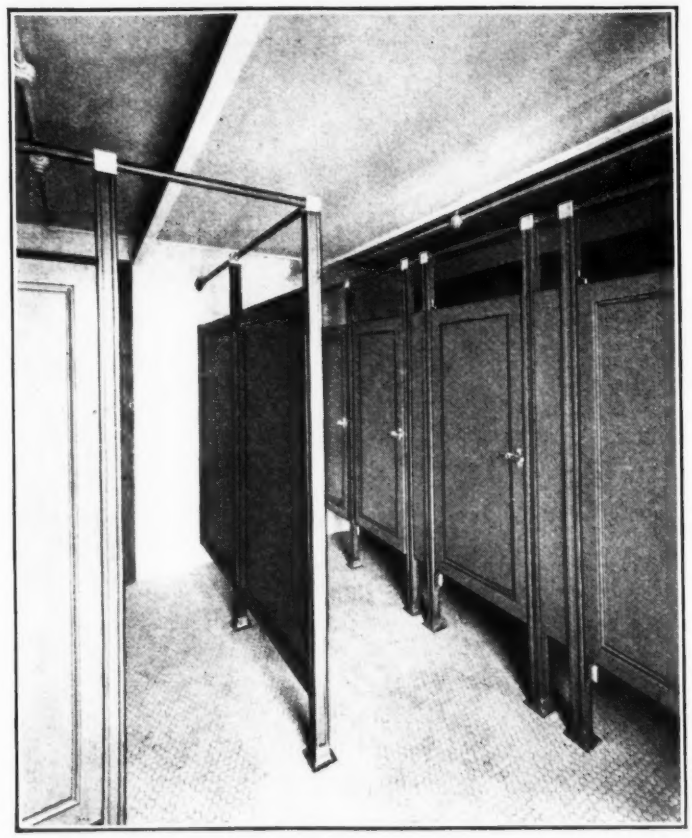
The Vertico-Slant with the water passing angularly from jet to mouth makes each drink a safe and sanitary one. Write for bulletin.

RUNDLE-SPENCE MFG. CO.
444 NO. FOURTH ST. MILWAUKEE, WISCONSIN

RUNDLE-SPENCE

LIPS CAN NOT TOUCH THE R-S NOZZLE

FOR SCHOOL TOILETS AND SHOWERS



Congressional Library, Washington, D. C.

Don't Take Chances With Health

DISEASE is too prevalent—the danger of contagion among school children too great—to take a chance with health. That's why modern schools are demanding the most sanitary toilet and shower rooms available.

When you want partitions that are easily cleaned—no cracks and crannies to collect germs, simple to erect, and adaptable to any space or arrangement—Sanymetal is the answer.

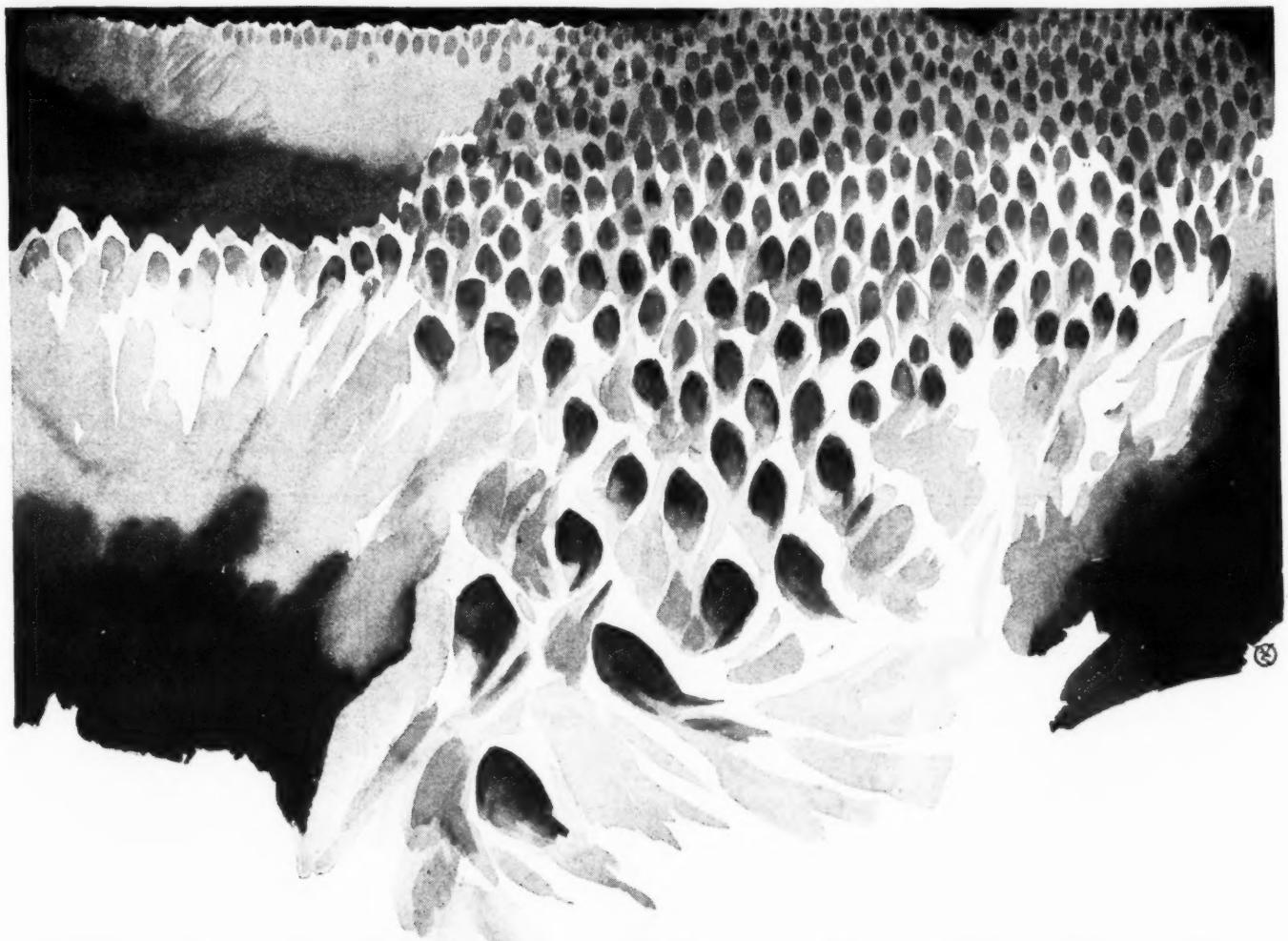
Sanymetal is made for toilet, shower, urinal and dressing room partitions, screens and wainscot. The Unit Panel construction makes Sanymetal Partitions unusually durable and rigid, and their fine, baked enamel finish is mar- and scratch-resisting.

Sanymetal Steel Partitions are insuring health and cleanliness in many modern American schools. They can do the same for your school. Write for the latest partition bulletin today.

Sanymetal Products for Schools are: Toilet, shower, dressing and urinal compartments. Corridor and smoke screens. Metal doors and wainscot. Sanymetal Gravity Hinges. Write for New Catalog No. 30.

The Sanymetal Products Co.
1703 Urbana Road Cleveland, Ohio

Sanymetal STEEL PARTITIONS



Against These Ghostly Hosts the Soldier of Sanitation is Your Ally

In the toilet rooms and plumbing fixtures of every public and semi-public building unseen, ghostly legions lie in ambush ready to attack at the first sign of failure or defect.

The final results of such attacks are much more disastrous than the mere dollar costs involved in remedying the troubles.

For bubble cups may wash germs to the lips of unsuspecting drinkers. Poorly operating closets and urinals may become breeding places for the most hideous of infectious diseases.

And with the number of people using the fixtures these dangers are all too common.

To defeat the grim hosts who promote such conditions the Clow Soldier of Sanitation has worked for 52 years. He has developed the most complete line of specialized plumbing fixtures in the world for schools, hospitals, industrial plants and public buildings.

And he has developed manufacturing and testing methods that assure perfect operation of every fixture before it is shipped.

You will notice the results in two ways: (1) the unseen legions ambushed for stealthy attack will be completely routed, (2) the cost of repelling them through the many years to come will be reduced to almost unbelievably low levels.

Call him in.

CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Consult your architect

The Clow Soldier of Sanitation is a specialist on all plumbing jobs where sanitation is likely to be an acute problem. At his finger tips is the accrued experience of 52 years. This is Ted Seabrooke, Toledo, Ohio.

School Architects Directory

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176 W. Adams Street
Chicago, Illinois
Architects and Engineers
Educational Buildings

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ARCHITECTS
522 FIFTH AVENUE
NEW YORK CITY

ROBERT R. GRAHAM
REGISTERED ARCHITECT
States of New York—New Jersey—Pennsylvania.
Member—N. Y. Chapter American Institute of Archts.
Complete Architectural Service on School Bldgs
—Consultations—
25 Prospect St. Middletown, N. Y.

S. ARTHUR AXTENS, A.I.A.
ARCHITECT
School Building Specialist
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ARCHITECTS ENGINEERS
SPECIALIZING IN SCHOOLHOUSE PLANNING
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FRANK B. GRAY
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School Specialist
73 S. LA SALLE ST. AURORA, ILL.

J. WILLIAMS BEAL, SONS
ARCHITECTS
185 DEVONSHIRE STREET
BOSTON, MASSACHUSETTS

DeVOSS & DONALDSON
ARCHITECTS
22 years experience designing School Buildings. Prompt attention given to requests for Estimates and Preliminaries
Second Floor, First National Bank Building
PORTSMOUTH, OHIO

GUILBERT & BETELLE
Architects
Chamber of Commerce Building
Newark, New Jersey

F. E. BERGER R. L. KELLEY
ARCHITECTS
Specialists Educational Buildings
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HACKER & HACKER
ARCHITECTS
SCHOOL SPECIALISTS
Fort Lee Trust Building, Fort Lee, N. J.
at the Plaza — Hudson River Bridge to New York City.

BONSACK & PEARCE INC.
WILL MAKE SURVEY OF YOUR NEEDS
Complete Architectural & Engineering
Services by School Specialists
411 Olive Street St. Louis, Mo.

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REGISTERED ARCHITECT
Modern School Buildings
RAPID CITY, SOUTH DAKOTA

HAMILTON, FELLOWS & NEDVED
ARCHITECTS AND ENGINEERS
814 Tower Court, Chicago
Members of the American Institute of Architects

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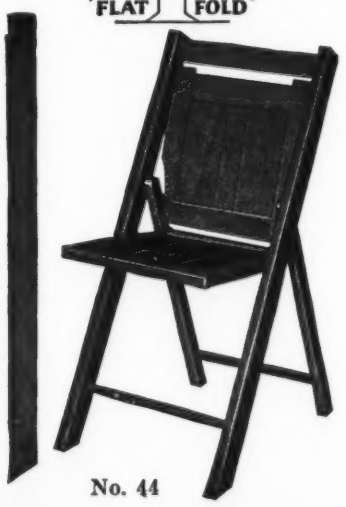

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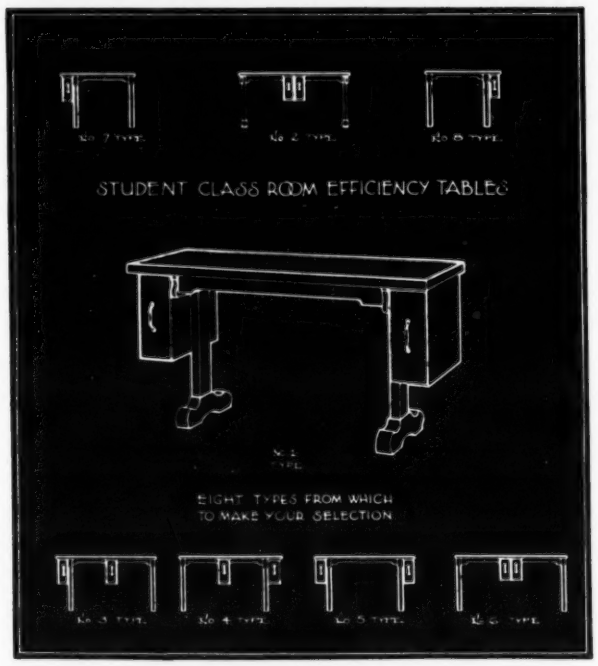

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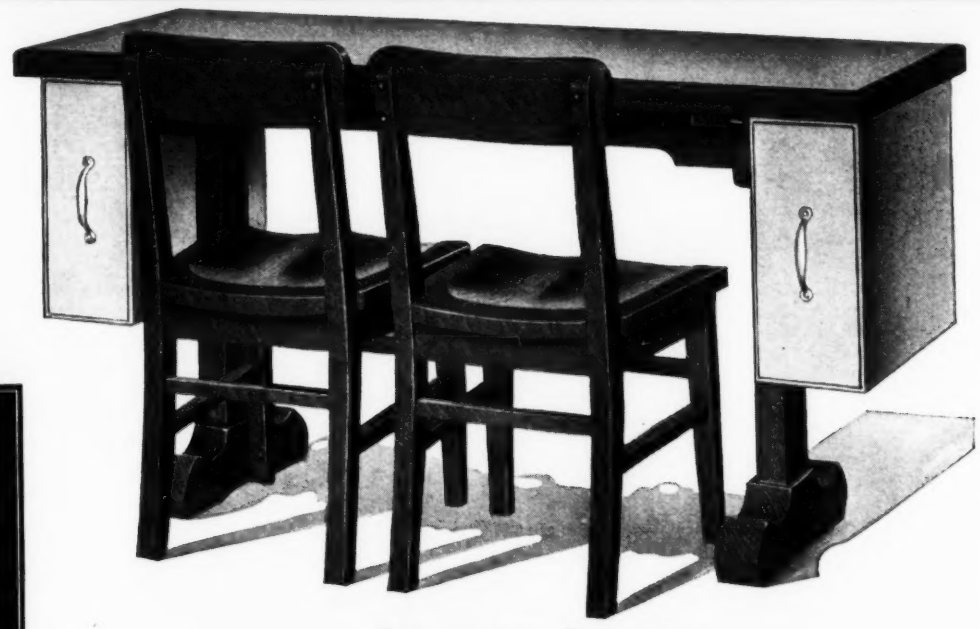

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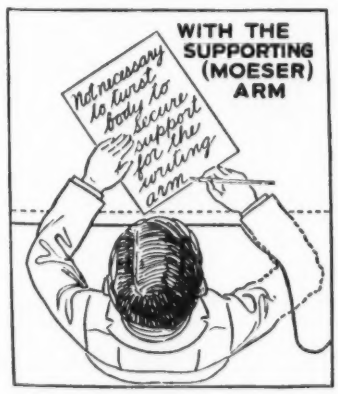

MOESER ARM

This overhead view of desk with Moeser Arm Top shows: increased roominess of desk top and space for working materials; and correct posture, vision and position, with arm support enabling pupil to write to bottom of paper without changing position of body. Exclusive National feature: and optional.

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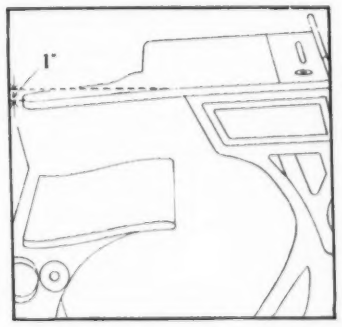

MOESER ARM

Drawing shows relative pitch of Moeser arm attachment with that of desk proper: considerably lower than arm support elevation on desks without Moeser Arm. Proof that Moeser Arm support follows pitch of desk to one inch drop, inducing positively correct shoulder position of pupil, otherwise not correctly possible. Exclusive National Feature: and optional.

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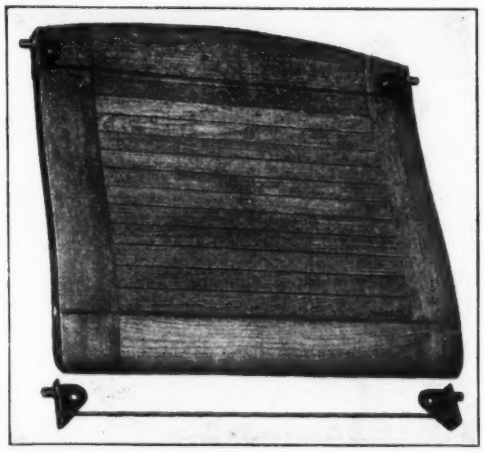

The Re-enforced Seat as used on all slat seat portable chairs absolutely insures against pulling apart at the joints and adds 100% to the life of chairs. Seat pivots on a solid steel pin acting on a brass bushing set in the standard. This assures a free-acting, noiseless hinge.

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"The Standard Line"

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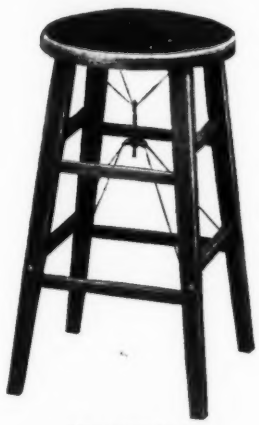

Illustrating
WITTLIFF BRACE
on stools

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An innovation in practical manufacturing of chairs. We are glad to announce the "Standard Line" will be equipped with "WITTLIFF BRACES". At all times the paramount issue in our minds is a comfortable, durable and practical chair at a minimum cost. We have manufactured chairs, to the best of our ability, for years and can truthfully say that never have we offered any single feature of construction that compares with the WITTLIFF BRACE.

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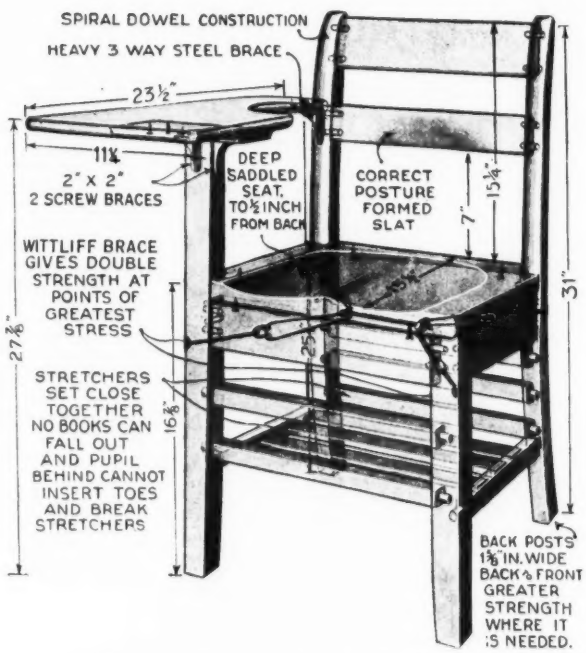
Not every chair will stand the test of hard usage regardless of care, cost or construction. It might seem boastful to say but after seeing our new patterns equipped with WITTLIFF BRACES, they seem to have the strength to last forever. The simple manner in which this brace is constructed makes it possible for anyone to understand why it re-doubles the strength at the points of greater stress. It has positiveness without undue rigidity. It has elasticity without tenseness. It creates resiliency, materially reducing breakage in transportation and use. The tested strength of this brace is 1680 pounds at the weakest point.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HEAVY 3 WAY STEEL BRACE
23½"
11¼"
2" X 2"
2 SCREW BRACES
DEEP SADDLED SEAT. TO ½ INCH FROM BACK
CORRECT POSTURE FORMED SLAT
7"
15¼"
31"
WITTLIFF BRACE GIVES DOUBLE STRENGTH AT POINTS OF GREATEST STRESS
27⅞"
STRETCHERS SET CLOSE TOGETHER NO BOOKS CAN FALL OUT AND PUPIL BEHIND CANNOT INSERT TOES AND BREAK STRETCHERS
16⅜"
25"
BACK POSTS 1⅜ IN. WIDE BACK & FRONT GREATER STRENGTH WHERE IT IS NEEDED.

The above phantom view clearly illustrates the construction of our No. 399 Tablet Arm Chair showing the WITTLIFF BRACE.

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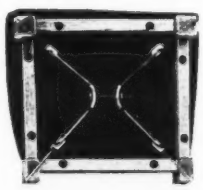
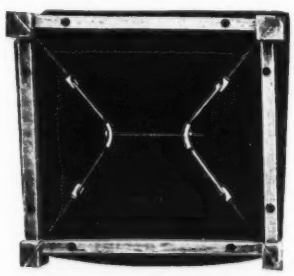
The simplicity of the construction of the WITTLIFF BRACE makes it impossible for it to get out of order. When this brace is embodied as a manufactured part of the chair, it is so placed that nothing further need be done. The equalized tension of the WITTLIFF BRACE necessitates no further thought. It eliminates permanently all repair expense. Remember when purchasing chairs the many advantages of this practical and ingenious device.



Illustrating
WITTLIFF BRACE
on our Kindergarten and
Junior Chairs

Illustrating
post construction of
WITTLIFF BRACE



Illustrating
WITTLIFF BRACE
on our Regular Tablet Arm
and Teachers' Chair

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Panama Combination Desk

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EXCEPTIONALLY EASY TO OPERATE

Folds perfectly flat, requiring minimum amount of storage space. Compact, sturdy, will not unfold accidentally.

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PEABODY'S STEEL CHAIRS

SAFE— WILL NOT TIP

Furnished with or without rubber feet, and with choice of plywood, steel or padded seats.

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Steel Adjustable Chair and Desk with Swivel Seat

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Manufacturer of this line since 1898

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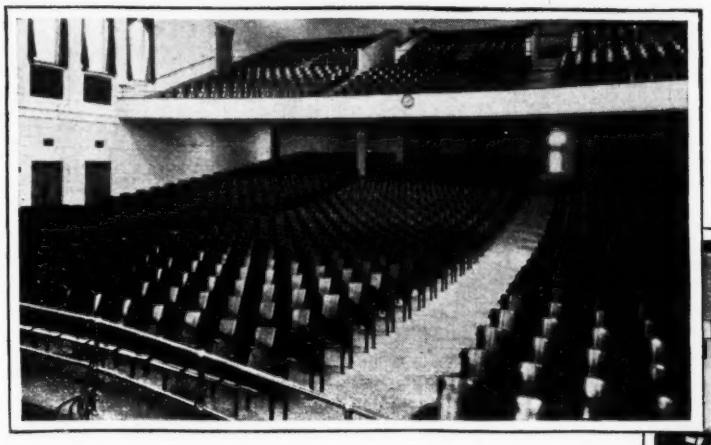

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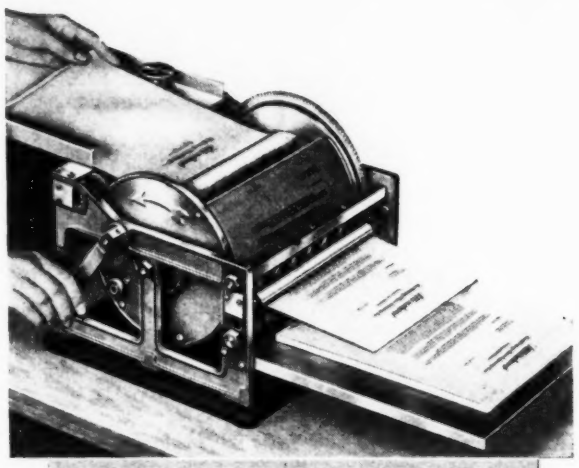

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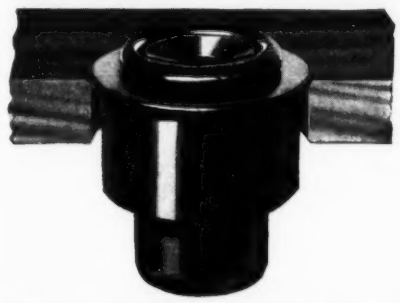

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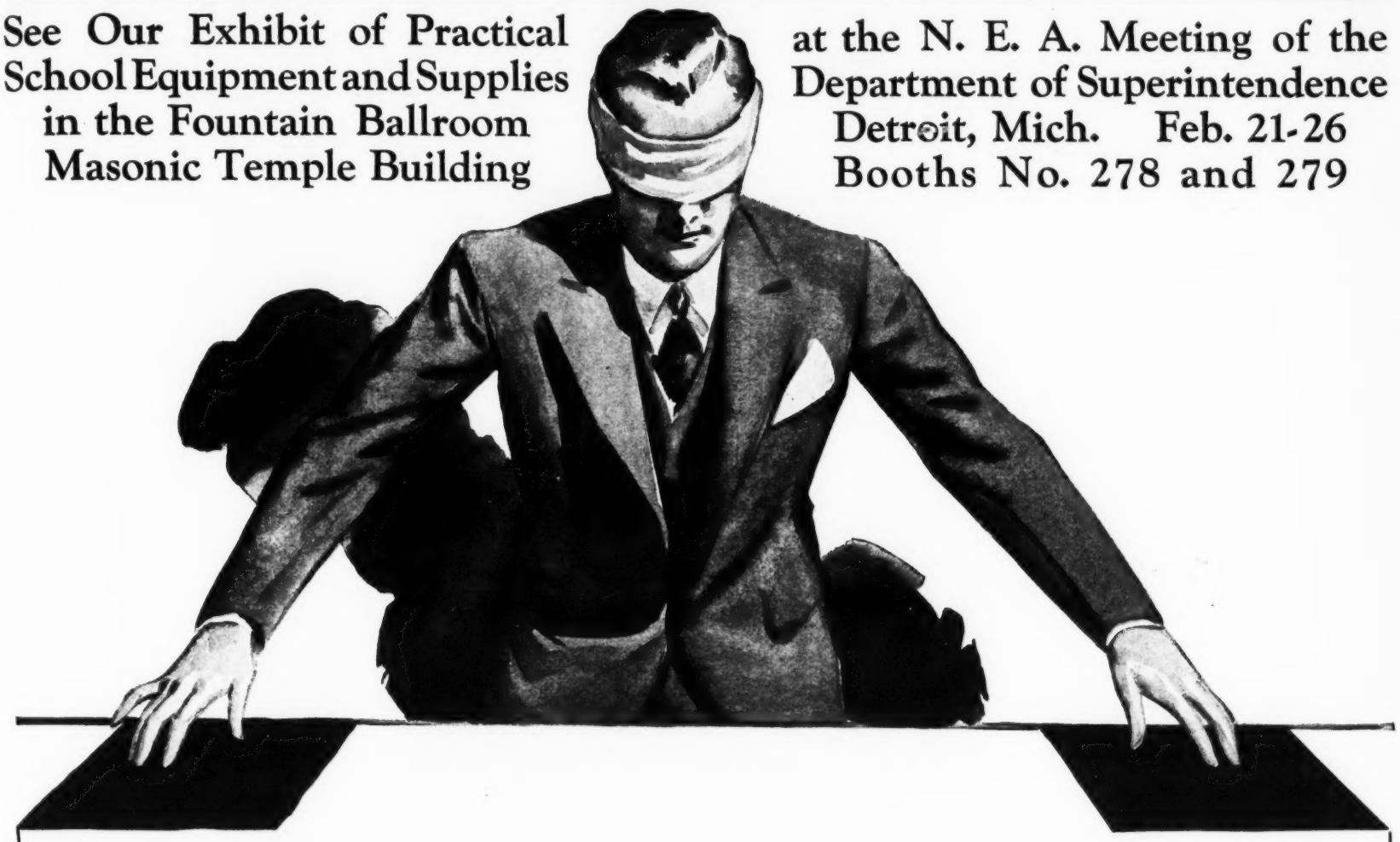

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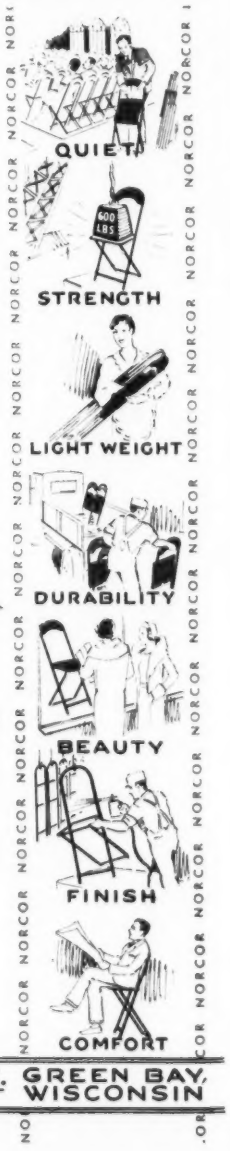

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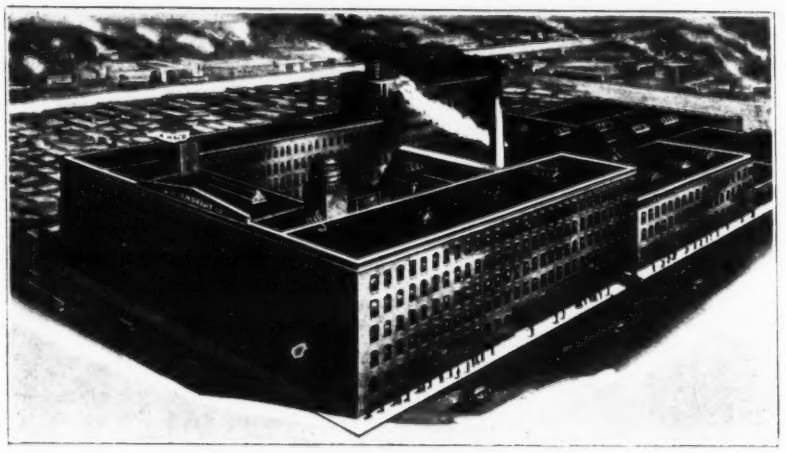

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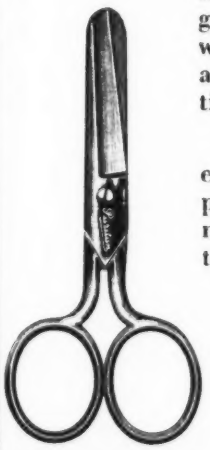

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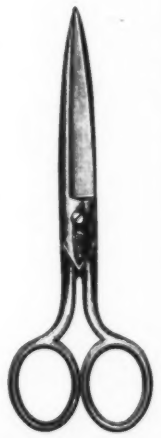

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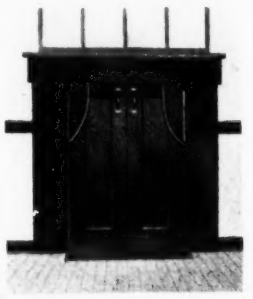
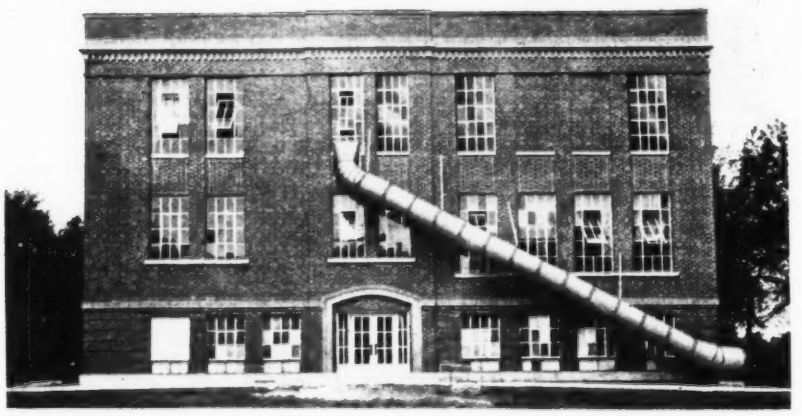


FIRE SMOKE, GASES AND PANIC

TUBULAR FIRE ESCAPE



Pictured above is the public school at Kellerton, Iowa. It is of fire-proof construction. Yet the school board officials responsible for the safety of Kellerton school children realized that no matter how well they might build, the possibility of fire is always present. True, modern construction lessens the hazard of fire. Nevertheless an average of six schools suffer serious fires every day. Authentic statistics show that 80% of school fires start in the basement. Contents of school buildings cannot be fireproof. Fire itself may never get beyond the basement and still perish or cripple scores of school children through smoke suffocation, gassing, and what is worst of all, PANIC, which crushes and tramples more victims than actually burn — even where the stairway type of fire escape is relied upon.

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With your water meter ticking away the gallons, you would immediately send for a plumber. You would not say, "We are too poor now; there are so many things which we need worse than that."

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It requires no servicing

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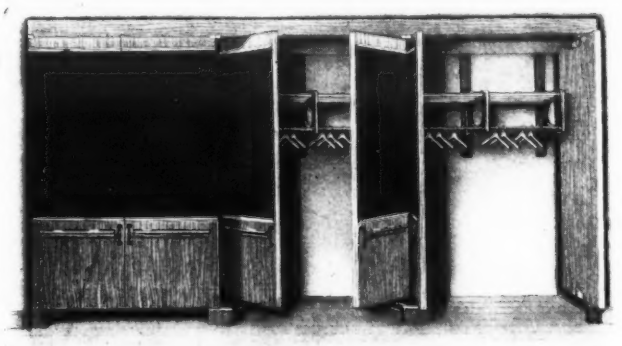

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The wardrobe illustrated is made for plaster ends, backs and ceilings. No jambs nor trim required; only doors, fillet, hinges and interior of racks and garment hangers completing the installation.

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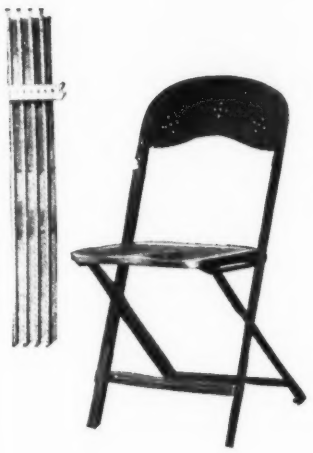

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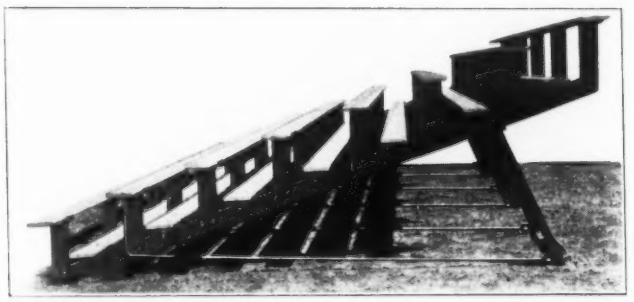
"A Lifetime Chair"



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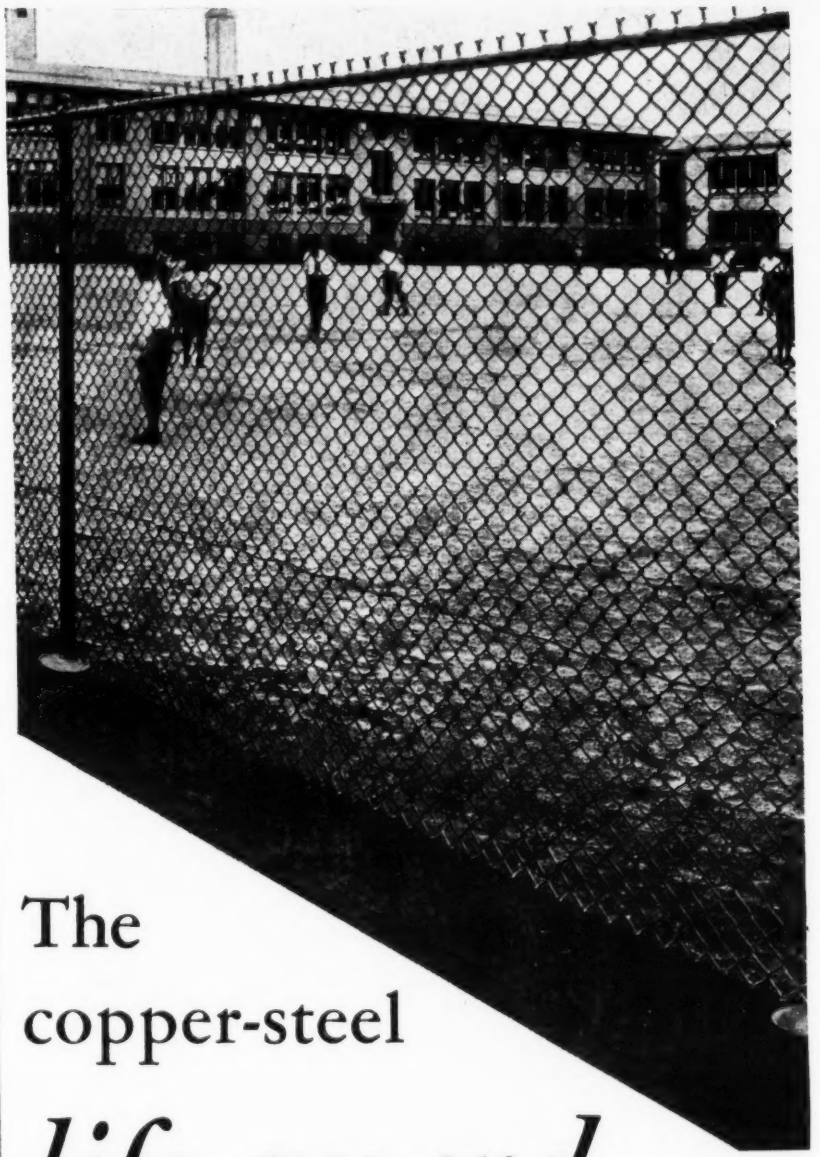

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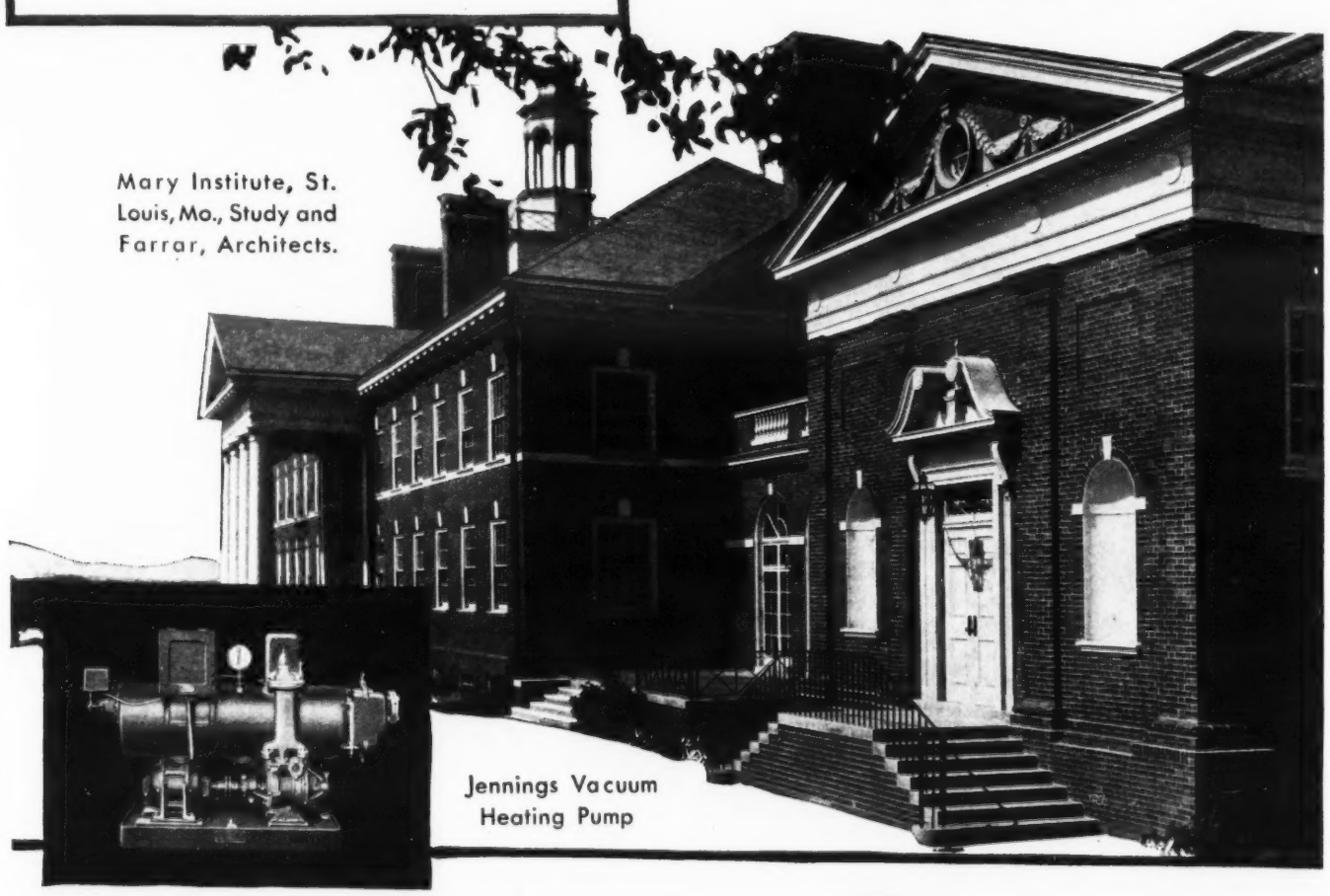

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Jennings Pumps

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VOL. 82
No. 2

THE AMERICAN School Board Journal

A Periodical of School Administration

FEBRUARY,
1931

Eastern Office:
342 MADISON AVENUE
NEW YORK, N. Y.

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
524-544 No. Milwaukee Street, Milwaukee, Wis.

Western Office:
66 E. SOUTH WATER STREET
CHICAGO, ILL.

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Telling Our Birth And Age

Next month this publication will enter upon the fortieth year of its existence. The story of its beginnings, its struggles, and its achievements will be modestly, yet vividly told.

The larger purpose involved in the story, however, will be a recital of the progress made during the past 40 years in the field of American school administration. Prominent writers, identified with the various divisions of the educational service of this country, will contribute their observations and conclusions to the columns of the publication.

The March number, therefore, will note ten years less than a half century of progress in the field of school administration as applied to the nation's system of popular education. It will demonstrate one of the great chapters in American school life.

The part which the AMERICAN SCHOOL BOARD JOURNAL played in the great educational drama will be brought to the fore. The transition from old-time approaches and notions, down to present-day conceptions and practices will be described. These discussions will prove both instructive and inspiring to all students and champions of the American idea and exemplification of popular education.

The founding of the AMERICAN SCHOOL BOARD JOURNAL cannot be measured merely as a private enterprise, and must be regarded in the nature of a milestone in the progress of the nation's struggles for educational efficiency. Approached in that sense, the publication is a distinctive contribution to the cause of American civilization.

WILLIAM GEORGE BRUCE,
Editor.

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Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the *Education Index*.

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THE AMERICAN
School Board Journal

Founded March, 1891, by WILLIAM GEORGE BRUCE

Volume 82, No. 2 | FEBRUARY, 1931 | Subscription, $3.00 the Year

DOUBLE HEADER: PROVIDE NEEDED CLASSROOMS AND RELIEVE UNEMPLOYMENT

Does School Success Spell Life Success?

Don R. Leech, Superintendent of Schools, Albion, Nebraska

Too often, the value of scholastic attainment is underrated by laymen, and even by some schoolmen. The press, too, sometimes scoffs at the value of high grades and scholastic standards. A Nebraska merchant declared that superior work in high school is not a promise of superior performance later. A southern California high-school principal, addressing a graduating class said this: "In my opinion, in ten years from now, the tail-enders of our school's graduating class are going to be the leaders as lawyers and doctors and business men" — and the building rocked with applause. This fast-developing sentiment determined me to establish its truth or fallacy in a scientific way.

Three years ago, when superintendent of schools in a district with a population of 1,500, I found fairly complete records covering a period of 40 years. This town is typical of communities of its size in the Mississippi valley. It sprang into being in the "seventies" and has had the usual years of growth and depression. Its main occupation is agriculture; there are no larger manufacturing plants or labor groups. Its population is made up of well-to-do farmers and business men with the usual quota of poor and down-and-outers.

My study included 146 men, all of whom had been out of high school at least five years. This group was divided into three sections, based on scholarship as follows: Below 80 per cent, between 80 and 89 per cent, and 90 per cent and above. Forty-eight of the total number ranked below 80 per cent, 69 ranked average in scholarship, and 29 ranked high. The 146 men are now scattered over the entire United States.

First, the 146 men were classified according to their financial rating. They were classed poor if they had less than $5,000, as well-do-do if they had between $5,000 and $25,000, and wealthy when they had accumulated more than $25,000. The problem was to discover what relationship if any existed, between scholarship in high school, and financial success in later life.

The tables compiled showed facts that were astonishing indeed. Of the low scholarship group 27 per cent, or about one fourth, ranked as well-do-do, as compared to 48 per cent of the average scholarship group, and 66 per cent of the high scholarship group. This means that the chances for the man of low scholarship to accumulate as much as $5,000 were only one in four; or, while one of this group was able to succeed reasonably well, three of the same group failed. In the average scholarship group, one succeeded financially to this same degree to one who failed; while for the high-scholarship group two succeeded, while only one failed. These figures indicate that the chances for success are largely on the side of scholarship.

Also it was of interest to find what kinds of occupations had been chosen by the various groups. Of this school's graduates about one third of each group has entered the field of business, indicating that low marks themselves do not prevent one's entrance into the field of barter and trade, nor does it indicate anything about business that deters one of high scholarship from entering into it. Once in business, however, the chance for financial success is greatly in favor of the person who has had high scholarship. The professions, such as medicine, law, and teaching, attract largely from the high-scholarship group. Forty-eight per cent of this group entered these professions, as compared with 17 per cent of the average, and 21 per cent of the low-scholarship groups. The fact that one fifth of the low and average groups entered these professions indicates that this door is not closed entirely against them.

According to the study, the farm absorbed graduates largely from the low-scholarship group. Only 6 per cent of the high-scholarship group entered upon farming as a vocation, as compared with 13 per cent of the average group, and 37.5 of the low group. This was partly due to the fact that the school is located in a rural community, so that the easiest occupation to enter is farming. If the school were situated in a factory district, this same class of individuals no doubt would be engaged in factory work. Then, again, the high school of a few years ago, with its English-Latin-mathematics course of study, had little to offer the wide-awake young agriculturist, and too often he left high school before graduation.

Another trend discovered also had significance. According to the figures, 21 per cent of those with low-scholarship grades are still living in the community, as compared with 17 per cent of the average group, and 3 per cent of the high-scholarship group. These figures indicate that not many of the high-school group are left in the community that educated them; those who remain come largely from the low and average groups. This may mean that graduates with high scholarship are more daring; that having surveyed the local situation, and finding poor opportunities for advancement, they have struck out to new locations. Seventy-two per cent of this high-scholarship group found its way into cities, as compared to 61 per cent of the average, and 48 per cent of the poor scholarship groups.

Our findings demonstrated beyond question the following facts: (1) That the boy of high scholarship is more likely to succeed financially than are his classmates of poor scholastic standing. (2) He is more likely to be engaged in one of the so-called professions. (3) He is living in a city. While these characteristics only partially define success, they are elements which cannot be ignored in measuring success in life as generally interpreted. We recognize that many prime characteristics are so intangible that they cannot be measured by rule, and that often they are the ones that make life most worth living, such as honesty, integrity, generosity, broad-mindedness, religious spirit, etc.

The findings of the study do not show that all of the high-scholarship boys are wealthy, or that all of the poor-scholarship boys are poor. Only a strong trend is shown. No high-school boy, even though he may have high scholarship grades, can afford to rest upon his record with a feeling of sure success. Neither need any boy, whose scholastic record is low, feel himself condemned to a life of mediocrity. Boys in high school should study these figures, which prove so conclusively that serious work is most important, if not all-important, during the years of secondary-school life. The findings which are the result of investigating the records of a single high school, are in no respect unusual, but are typical of many schools.

What's His Wife Like?

Emily Guiwits, Lincoln, Nebraska

"The thing I can't see is this," said Secretary Brown of Dotville, "if your man Wilson is all you say he is, why are you so willing to let him go?"

Secretary White, of Dashville, looked out of the window and smoked steadily. "The fact is, Brown, we're not letting *him* go," he answered, finally. "We're letting his wife go."

"So that's the answer, is it? Wishing her off on us? For my part I'd rather the fault lay in the man himself."

Secretary White left the window and sat down at his desk. "You naturally would think that," he replied. "You could scarcely think otherwise. But there's more to it than appears on the surface. We're not deliberately wishing a bad deal on your board. In a new town and under new conditions I honestly doubt if Mrs. Wilson would be the nuisance she is here."

"What makes you think that?" asked Mr. Brown. "How can the move of a hundred miles change human nature, especially a feminine fraction of it? You've got to show me!"

"That is what I propose to do," said Mr. White. "First, let me set the stage. Mrs. Wilson is considerably younger than her husband. She came here a bride, just out of college. She is a sorority member and lived in the sorority house. As bad luck has it, the doctor's girl belongs to the same sorority, and so does Smith's girl — you know Smith is president of the board. So there was a vicious triangle hard to handle. Every time a vacancy occurs, out trots a member of that sorority, and there's one member of the board sold on her before he knows whether she's a blonde or brunette. The doctor's girl runs some with their church crowd, and the preacher is a board member. You can see the way things stack up. We have two teachers from that sorority now, and the five of them make a little closed corporation and try to run the school — and town, too."

"Yes, I see what you mean," said Secretary Brown. "But why wouldn't the same thing be repeated with us?"

"Do a little detective work," answered Secretary White. "Find out if this sorority has any members in town or any Dotville members ready for jobs. Then I'll have a plain talk with Wilson, and with his wife, too, if it comes handy. He's worth saving if a man can do it simply by getting himself disliked by a little rattle-head or two."

"We had a case of firing the wife some six years ago," said Secretary Brown. "But it was a different case. This woman unhooked her tongue in the morning and let it run all day. She was as clever as a corporation lawyer in finding out school secrets; she had the habit of being mysterious over nothing; she magnified details; and the things our Thursday Afternoon Club didn't know about school business weren't worth telling. We had more than one talk with Clarkson, the superintendent; he denied up and down that he talked over school affairs at home. She simply was smarter than he was, and got the information when he didn't know it."

"What became of the man?" asked Mr. White. "Did he move over into Iowa? Seems as if I heard that story from my brother-in-law last summer. They had a man they liked, but Jim said his wife retailed school affairs from morning till night, and they got tired of it."

"I don't know where he went," said Mr. Brown. "But tell me this: What should a board do? They can't sacrifice the school to the individual."

"It's a hard proposition," agreed Mr. White. "A board has to be prosecuting attorney and judge and jury, and whatever they do, they're kicked by somebody or his wife. But to go back to this case: Mrs. Wilson is no fool. If she sees that she's ruining his career, self-interest will make her reform. Then there could scarcely be the same conditions elsewhere. The way these sorority sisters fight among themselves but stick

(Concluded on Page 128)

Safeguarding School Board Deposits

H. H. Linn, Assistant Superintendent of Schools, Muskegon, Michigan

It may be safely stated that millions of dollars of public-school funds have been lost during the past decade because of bank failures. Losses will occur during 1931. These losses should not need to occur, but they will, just as they have in the past, because the public officials responsible for the proper administration of public funds are not, in all instances, requiring and providing adequate protection to safeguard the school deposits. The need for safeguarding school deposits against loss in the event of bank failure will be better understood if the facts concerning bank failures in this country are known.

Thousands of Bank Failures Since 1920

The writer was amazed, when making a study,[1] to learn that since 1920, banks in this country have been failing at the rate of approximately two a day for every business day in the year. From 1921–1929 inclusive, a total of 5,642 banks with deposits aggregating $1,722,000,000 suspended operations because of their inability to meet their creditors' claims. The failures by years are shown in Table I. Late in December, 1930, it was estimated that there would be around a thousand bank suspensions in 1930, involving $750,000,000.[2] This is the worst record for any one year in the history of the country.

TABLE I. Number of Bank Failures in the United States From 1921–1929, Inclusive*

Year	*Number of Failures*	*Deposits*
1921	501	$ 196,000,000
1922	354	111,000,000
1923	648	189,000,000
1924	776	213,000,000
1925	612	173,000,000
1926	956	272,000,000
1927	662	194,000,000
1928	491	139,000,000
1929	642	234,000,000
Total	5,642	$1,722,000,000

**The Commercial and Financial Chronicle*, July 5, 1930, p. 61.

Failures Most Serious in Certain Regions

These bank failures have occurred in every section of the country, but principally in the West Central District and in certain Southern States. In some states more than 50 per cent of the banks in operation in 1920, have suspended since that time. In some counties in the agricultural states every bank has closed. Table II shows the failures in each of the states from 1921–1929, inclusive. In Vermont and the District of Columbia, no failures were reported. The New England States, as a group, experienced the fewest failures, and the West North Central States the greatest number.

It is a noticeable fact that the greatest number of failures occurred in regions devoted chiefly to agricultural pursuits, but this gives no assurance that future failures may not occur in those sections devoted chiefly to manufacturing. This point is brought out in the report of the Economic Policy Commission:

In the absence of improvements in organization and practice, it is not to be doubted that a discreditable number of failures will continue to occur, mainly concentrated in periods of trade reaction. . . . Present immunity furnishes no certain assurance that all banks in a locality are and will remain in competent hands. The possibility, if not the probability, must be recognized that adjustments experienced in agriculture might be accompanied by numbers of banking casualties in communities in which manufacturing is the major occupation.[3]

[1]Linn, H. H., *Safeguarding School Funds*, Contributions to Education, No. 387, Bureau of Publications, Teachers College, Columbia University.

[2]"Why Banks Fail," *The Literary Digest*, December 27, 1930, p. 7.

[3]Economic Policy Commission, "The Causes of Bank Failures and Some Suggested Remedies," *American Bankers Association Journal*, Vol. XX, p. 305, November, 1927.

Babson and other leading economists have recently called attention to the difficult situation in which the banks, especially in the smaller communities, find themselves as a result of the present business depression. The present paper is especially timely in that it calls attention to the situation among the banks and suggests definite standards for judging the safety of banking institutions. A later paper to be published in an early issue will suggest especial methods of further safeguarding bank deposits. — *The Editor.*

Causes of Bank Failures

The bank failures during the past decade may be attributed to a number of causes. The postwar deflation was a major cause. Land values in the agricultural sections especially, had boomed following the close of the world war. The prices of farm products collapsed during the period of deflation and the land-boom bubble burst, leaving the banks holding frozen loans and worthless paper. The inevitable result was that hundreds of banks had to close their doors. Industrial concerns also went bankrupt, forcing other banks to suspend operations.

Another reason for so many bank failures is that there have been, and still are, too many small, weak banking institutions with insufficient capital and resources to assure success. National banks have been required to have a minimum of $25,000 capital, and this minimum is permitted only in the smaller communities. This amount was established before the war when the value of the dollar was higher than it is now. The best authorities would raise the minimum to at least $50,000 today; yet there are states that permit state banks to organize with a capital of only $15,000. It is these weaker banks with the low capitalization that have made up the majority of the failures. This is shown in Table III which points out that 62.3 per cent of the failures occurring from 1921–1929 had $25,000 capital or less, and that 88.3 per cent were capitalized under $100,000.

TABLE II. Number of Bank Suspensions in the United States From 1921–1929 Inclusive, Distributed by States*

State	*Total Number Banks June 30, 1920*	*Number Suspensions, 1921–29*	*Per Cent Suspensions to Total Banks*
Vermont	108	0	0
District of Columbia	45	0	0
New Hampshire	125	1	.8
New Jersey	388	2	.8
Massachusetts	465	6	1.3
Connecticut	220	3	1.4
Maine	161	3	1.9
New York	1,056	26	2.5
Pennsylvania	1,546	40	2.6
Maryland	282	11	3.9
California	723	31	4.3
Delaware	47	2	4.3
Ohio	1,145	55	4.8
Rhode Island	48	3	6.3
Kentucky	584	43	7.4
Wisconsin	976	75	7.7
Illinois	1,610	138	8.6
Alabama	352	32	9.1
Nevada	33	3	9.1
Virginia	488	45	9.2
Michigan	700	66	9.4
Mississippi	354	34	9.6
West Virginia	340	34	10.0
Indiana	1,057	115	10.9
Tennessee	546	66	12.1
Louisiana	267	34	12.7
Utah	133	18	13.5
Washington	394	56	14.2
Oregon	277	43	15.5
Kansas	1,349	223	16.5
Missouri	1,652	296	17.9
Texas	1,582	299	18.9
Arkansas	487	95	19.5
North Carolina	623	125	20.1
Colorado	403	89	22.1
Minnesota	1,515	411	27.1
Oklahoma	959	266	27.7
Nebraska	1,196	339	28.3
Iowa	1,763	528	29.9
Arizona	87	27	31.0
Idaho	222	72	32.4
Wyoming	160	60	37.5
Georgia	738	319	43.2
Montana	431	203	47.1
North Dakota	898	429	47.8
South Carolina	461	227	49.2
New Mexico	123	62	50.4
South Dakota	694	394	56.8
Florida	265	190	71.7

**The United States Daily*, February 28, 1930, p. 12.

TABLE III. Bank Suspensions, 1921–1929, Classified According to Amount of Capital*

Banks with Capital of	*Number Suspended*	*Per Cent of All*
Less than $25,000	2,204	39.1
$25,000	1,310	23.2
$25,001–$50,000	485	8.6
$50,001–$100,000	985	17.4
$100,001–$200,000	404	7.2
$200,001–$600,000	144**	7.2
Figures not available	110	1.9
Total	5,642	100.0

**The Commercial and Financial Chronicle*, July 5, 1930, p. 61.
**Includes 1 bank with capital of $750,000, 7 with capital of $1,000,000, 1 with capital of $1,225,000, and 1 with capital of $1,309,000.

Many banks have failed for lack of competent management. Others have failed because of dishonesty among the officials. Some of the banks that suspended since the sharp decline of the New York stock market in 1929, did so due to the mistaken judgment of bank officials who borrowed bank funds, with which to speculate, without the customary formal loans.

However, regardless of causes, the fact remains that additional institutions are going into receivership day after day, and the public officials should take steps adequately to safeguard the school funds in the event of failure. The writer does not wish to convey the impression that the country is on the brink of a panic, but the general banking conditions are such that more attention must be given to safeguard the school deposits.

Federal Reserve System No Guarantee Against Failure

There are, no doubt, many individuals who have the mistaken idea that the Federal Reserve System will guarantee to its members immunity against failure. Such is not the case. Hundreds of Federal Reserve banks have failed during the past ten years. However, banks that are members of the System are less likely to fail than those that are not members. At least a greater proportion of nonmember banks have failed than member banks. This is shown in Table IV which points out that while 17.8 per cent of the nonmember banks that were in operation June, 1920, suspended operations between 1921–1927, only 14.4 per cent of the state bank members closed their doors during that time, and 8.0 per cent of the National banks, all of which were members of the Federal Reserve System, failed.

There also are individuals who have the idea that National banks are absolutely safe. This, of course, is not true, although this class of bank has suffered a lower percentage of failures than have the state banks. All National banks must be members of the Federal Reserve System, which undoubtedly strengthens the class, but there are other factors to be considered. With the exception of the Loan and Trust companies, the National banks have, on the average, more capital, surplus, undivided profits, resources, and deposits, than any other class of bank. These items bear a definite relationship to the strength of a bank.

TABLE IV. Number of Bank Suspensions During the Years 1921–1927 (Inclusive), Showing Amounts of Capital and Deposits Distributed Among National Banks, State Bank Members of the Federal Reserve System, and All Banks That Are Not Members of the Federal Reserve System*

	Number	Capital (000's omitted)	Deposits (000's omitted)
A. All Banks			
1. Suspended	4,513	$ 169,004	$ 1,350,603
2. Reopened	559	21,241	199,612
3. In operation, June, 1920	30,078	2,682,752	41,445,018
4. Ratio of suspensions to banks in operation	15.0%	6.3%	3.3%
B. National Banks			
1. Suspended	642	38,070	287,154
2. Reopened	88	4,685	37,481
3. In operation, June, 1920	8,025	1,223,416	17,148,231
4. Ratio of suspensions to banks in operation	8.0%	3.1%	1.7%
C. State Bank Members of Federal Reserve System			
1. Suspended	193	14,928	107,701
2. Reopened	19	1,270	12,796
3. In operation, June, 1920	1,374	493,628	8,224,105
4. Ratio of suspensions to banks in operation	14.4%	3.0%	1.3%
D. All Other Banks not Members of Federal Reserve System			
1. Suspended	3,673	116,006	995,748
2. Reopened	452	15,286	149,335
3. In operation, June, 1920	20,679	965,708	16,072,682
4. Ratio of suspensions to banks in operation	17.8%	12.0%	5.9%

*Data taken from a form letter entitled "Bank Suspensions in 1927 and During 1921–1927" sent out by the Federal Reserve Board at Washington, April 11, 1928.

TABLE V. National and State Bank Failures in the United States From January 1, 1900, to About October, 1925*

Groups Based on Amount of Resources of Individual Banks	Number of Banks**	Per Cent of Failures	Total Resources	Per Cent of Resources
National Bank Failures				
1. Under $250,000	145	28.16	$ 22,655,000	5.61
2. $250,000 to $500,000	156	30.29	55,393,000	13.71
3. $500,000 to $1,000,000	104	20.19	71,721,000	17.76
4. $1,000,000 to $5,000,000	33	6.41	103,102,000	25.52
5. $5,000,000 to $10,000,000	9	1.75	58,601,000	14.51
Totals	515	100.00	$ 403,915,000	100.00
State Bank Failures				
1. Under $250,000	1,858	63.83	$ 227,918,000	18.80
2. $250,000 to $500,000	597	20.51	208,118,000	17.16
3. $500,000 to $1,000,000	272	9.34	182,495,000	15.05
4. $1,000,000 to $2,000,000	105	3.61	143,368,000	11.77
5. $2,000,000 to $5,000,000	57	1.96	165,937,000	13.68
6. $5,000,000 to $10,000,000	12	.41	78,852,000	6.50
7. Over $10,000,000	10	.34	206,556,000	7.04
Totals	2,911	100.00	$1,213,244,000	100.00
National and State Bank Failures (Combined)				
1. Under $250,000	2,003	58.46	$ 250,573,000	15.50
2. $250,000 to $500,000	753	21.98	263,511,000	16.30
3. $500,000 to $1,000,000	376	10.98	254,216,000	15.73
4. $1,000,000 to $2,000,000	173	5.05	235,810,000	14.55
5. $2,000,000 to $5,000,000	90	2.63	269,039,000	16.64
6. $5,000,000 to $10,000,000	21	.61	137,453,000	8.50
7. Over $10,000,000	10	.29	206,556,000	12.78
Totals	3,426	100.00	$1,617,158,000	100.00

*Adapted from Table 11 on page 47 of Chapter VIII entitled "Bank Failures in the United States" by A. H. Stockder, found in *Report of An Inquiry into Contemporary Banking in the United States*, Vol. III. (H. Parker Willis, Ed.) An unpublished manuscript in the Business Library, Columbia University, 1926.

**The number of failed banks here given includes only those whose resources at the time of failure were available.

Majority of Failed Banks Are Small

While the number of failures in recent years has been astounding, it must not be overlooked that the number of failures is not so important as the amount of the losses. A single large bank failure may be more disastrous than a hundred small ones. As a matter of fact, the great majority of the failures have been with the smaller banks. In a study[4] made in 1926, under the direction of Dr. H. Parker Willis, it was learned that of the 3,426 bank failures reported from 1900–1925, 2,003 banks, or 58.46 per cent of the total, had resources of less than $250,000 each, and 91.42 per cent had individual resources of less than $1,000,000. But while 58.46 per cent of the failures had individual resources of less than $250,000, their aggregate total made up only 15.5 per cent of the grand total of the resources of all the banks that failed (see Table V).

However, while it is true that the majority of banks that have suspended operations were small, both as judged by capital and deposits, during the last quarter of 1930 a number of large banks were unable to continue business. The most notable of these failures was the Bank of United States in New York, which suspended December 11, 1930. This bank had 400,000 depositors and deposits exceeding $200,000,000. Its failure is significant because it calls attention to the fact that even a large bank in the financial center of this nation may get into financial difficulties that will compel it to suspend operations.

Bank Failures Not Total Losses

A bank failure does not necessarily mean that the depositors face the total loss of their deposits. In fact, the total loss is extremely rare, although the percentage of dividends returned to depositors is sometimes pitifully small. Many banks that suspend are able to reopen for business with no loss to customers. Of the 4,513 banks that closed from 1921–1927, a total of 559 reopened for business.

From 1863, when the first National bank failure occurred after the enactment of the National Bank Act, up to and including October 31, 1928, a total of 1,164 National banks had been thrown into receivership, of which 712 had been entirely liquidated. The creditors of these 712 banks received, on the average, 80.57 per cent of their proved claims, leaving a loss of 19.43 per cent.[5]

Losses in National bank failures during recent years have been more serious. During the year ending October 31, 1928, 74 receiverships of National banks were closed, all the banks closing since the beginning of 1921. The creditors of these banks received dividends amounting, on the average, to 61.16 per cent of proved claims, making their loss 38.84 per cent, or almost twice the average loss sustained by National bank depositors from 1863 to 1928. Country-wide figures on state bank losses are not available, but information from various sources indicates that the losses in state banks have been greater, on the average, than losses in National banks. For both National and state banks combined, of the banks thrown into receivership since 1920, the losses to depositors have averaged 40 per cent.

The reader may now ask, "If school deposits are in potential danger from bank failure, how may they be protected against loss?" Several points must be considered in answering this question: (1) Who should select the school depositories? (2) What banks should be eligible as depositories? (3) On what bases should a depository be selected? (4) What provisions should be made for the payment of deposits in the event of bank failure?

Who Should Select School Depositories?

There is no uniformity in the legal provisions made to select the school depositories. In some states this responsibility rests with a single individual, in others with a board. In Illinois, the township treasurer as custodian of township funds designates the depositories. In Arkansas, the county court selects the depository.[6] In West Virginia, the county sheriff, who is ex officio treasurer, names the banks he prefers to have serve as depositories for the county funds, and the county court designates these banks as the depositories, provided they comply with the legal requirements.[7] In Montana, the county boards of commissioners designate the depositories for the county funds, which include the school funds. In Pennsylvania, "the board of school directors in any school district . . . may designate one or more banks or trust companies as a depository or depositories for its school fund."[8] Different legal provisions are made in other states.

The most common provision arranges for the selection of a school depository by a board of officials rather than by an individual. This is the preferable method. The possibilities of collusion are lessened under such a plan. Allowing a single political official to select the depository with no restrictions is open to severe criticism. Friendship, personal interest, or political considerations may sway his judgment and jeopardize the public funds. The funds may be placed in weak banks without proper security, and the proper amount of interest may not be secured. There have been too many scandals[9] relating to public depositories to permit further exploitation. The selection of the depository by a board of officials rather than by a single individual should be the rule.

What Banks Should Be Eligible as Depositories?

In the main, the statutes of the several states do not discriminate against any class of bank as depository for public funds. For example, in Wyoming the law reads that school funds shall be deposited "in banks, incorporated under the laws of this state and in National banks doing business in this country."[10] This law, like those in most of the other states, permits any bank incorporated under the state law to be selected as a depository, and also recognizes the National banks.

But all classes of banks are not equally desirable as public depositories. Judging from the record of the past decade the National banks have had a smaller percentage of failures and also a smaller percentage of losses than the state banks. The National banks also have larger average capital and resources, which, other things being equal, make them stronger.

[4] *Report of An Inquiry Into Contemporary Banking in the United States*, Vol. III. An unpublished manuscript in the Business Library, Columbia University, 1926.

[5] For a further analysis of these bank failures see Linn, H. H., *op. cit.*, pp. 84–87.

[6] *Acts of Arkansas*, p. 582.

[7] *Barnes' West Virginia Code Annotated, 1923*, p. 671.

[8] *School Laws of Pennsylvania, 1925*, p. 33.

[9] See Faust, Martin L. *The Custody of State Funds*, National Institute of Public Administration, New York, 1925, 176 pp. Dr. Faust exposes a number of state scandals.

[10] *School Laws of the State of Wyoming, 1927*, p. 105.

Ackerman discusses the relative safety of banks as follows: "National banks are considered good risks, being under federal supervision and subject generally to very strict examination. State banks . . . are somewhat more hazardous because of greater freedom which some may exercise in loaning funds. Savings banks are considered good risks; their banking practices are guarded closely by statutory laws. Trust companies, on account of their extensive freedom in making certain types of loans, present special hazards. Private banks are not ordinarily considered good risks."[11]

While the National banks, as a class, may be less hazardous than the other classes of banks, it would not be wise to limit the public depositories to National banks. The banks must be selected on the basis of individual strength. Many state banks are safer than certain National banks, and it would be unfair to discriminate against them. There also are private banks that are safer than either certain National or state banks, but they should not be permitted to serve as public depositories. As a class, the private banks are weak. These banks are not always under the supervision of state authorities and their business methods are frequently loose. Surety companies, as a rule, will not write bonds for private banks because they consider them such hazardous risks. Private banks should be barred as depositories for public funds.

In Table III it was pointed out that the great majority of the banks that failed during the past decade were capitalized for very small amounts, 62.3 per cent having capital of $25,000 or less. It is evident that the smaller the amount of capital the more likely the bank is to fail. The best authorities agree that no bank should be permitted to do business with less than $25,000 capital, and $50,000 is even better for minimum. Surety companies, as a rule, will not write bonds for banks with less than $25,000 capital. Public officials selecting depositories for funds should not be criticized if they refuse to consider any depository with less than $50,000 capital. It would be well if statutory provisions limited public depositories to banks with a capital of not less than this amount.

School authorities also need to exercise caution in the selection of depositories that are members of a chain system. Examiners frequently find it difficult to make a satisfactory examination of chain banks due to the shifting of paper from one bank to another. There have been a number of chain crashes in recent years, resulting in large numbers of related banks suspending operations. In one crash, 83 banks in Georgia and 35 in Florida, all members of one chain, closed their doors.[12]

Branch banking should not be confused with chain banks. A chain of banks is made up of individual banks, each being under a separate organization. These banks become a chain through the interlocking of the directorates, which practically means that one central controlling body dictates the policies of the member banks. In branch banking there is only one legal entity and one main unit, of which the branch bank is only a part of the main institution. Branch banks are not to be considered as chain banks or classified as such.

Public authorities would also act wisely in refusing to accept as depositories any banks that have not been in business for a reasonable length of time; say two years as a minimum. It requires time for a bank to grow into the confidence of the public. Many of the smaller banks starting in business are weak and the public funds should not be jeopardized. There is an additional argument: There have been cases where, through collusion, new banks have been organized solely for the purpose of receiving public funds on deposit, at an extremely low rate of interest. This condition should not be tolerated.

[11]Ackerman, S. B., *Insurance*, p. 453.

[12]McFadden, H., "The Chain Bank Crash in Georgia," *American Bankers Association Journal*, September, 1926.

On What Bases Should Public Depositories Be Selected?

There is no formula or test that can be used to check the relative safety of a bank with infallible accuracy. Hundreds of bank examiners are at work all the time checking the banks throughout the country. While, in general, these examiners can tell if an institution is weak or is in strong financial condition, even their judgment is occasionally wrong. Banks have been declared in good condition one week only to fail the next.

Surety companies that write depository bonds are especially interested in this question of judging the safety of a bank. So long as they are writing depository bonds for banks that do not fail, they are making good profits. It is to their interest to know whether or not a bank is likely to fail. They do not take, what they consider, any chances. Yet these surety companies have paid out millions of dollars in bank failures due to mistaken judgment. If bank examiners and surety officials who have made a deep study of the subject are so often mistaken, certainly the average public official will need to exercise care in the selection of a depository for public funds.

In order to study the financial condition of a banking institution it is necessary to have a recent financial statement, or better, a series of annual statements. From a series of statements it is easier to learn whether or not a bank is progressing. A bank that is steadily losing deposits, with a decrease in surplus and undivided profits, may be viewed with suspicion.

Surety companies, before writing depository bonds, require the banks to make out complete financial statements. They also ask for information regarding the location, the history, and organization of the institutions. A few of the very largest banks are excused from this red tape because of their acknowledged strength, but they are exceptions.

To learn what points the surety companies consider before writing depository bonds, the writer had personal interviews with the officials of eight leading surety companies.[13] From these conferences has been developed the following list of ten items considered in analyzing a bank's financial statement, to be used in determining the relative safety of a bank.

1. *Capital.* Practically all the surety companies agree not to write depository bonds for banks with less than $25,000 paid-in capital. One company does not care to write bonds for banks with less than $500,000 capital and surplus. The surety companies agree, in general, that their business would be less hazardous if they refused depository bonds to all banks having less than $50,000 capital. A good rule for public officials to follow is not to accept any bank with less than $50,000 capital as a depository for the public funds.

2. *Surplus and Undivided Profits.* Surplus and undivided profits, in addition to the capital, make up the margin of safety for depositors. If the bank should fail, these items are used for paying off creditors' claims. If the resources are not inflated, a large amount of surplus and undivided profits is a favorable item. The surplus of a bank should not be less than 20 per cent of the capital. If a series of bank statements indicate a continual increase in the amount of the surplus and undivided profits, it is a favorable sign, provided the increases are not inflated values. A continual decrease in the surplus and undivided profits is an unfavorable sign.

[13]Aetna Casualty and Surety Company, American Surety Company, Fidelity and Casualty Company, Fidelity and Deposit Company of Maryland, Globe Indemnity Company, National Surety Company, Royal Indemnity Company, and the United States Fidelity and Guaranty Company.

3. *Deposits.* In order to be successful, a bank must have deposits. Other things being equal, the greater the amount of deposits, the greater the profits. A bank that is not profitable cannot continue in business.

If a series of bank statements indicate a continual decrease in deposits it may be taken as an unfavorable sign. A continual increase, on the other hand, is favorable.

It is doubtful that a bank with less than $100,000 in deposits can make any profit above expenses. Public funds certainly should not be carried in any banks with less than this amount of deposits. Public officials would have less cause to worry if they refused to accept as public depositories any bank with less than $1,000,000 in deposits.

4. *Public Deposits.* Public deposits frequently make up a considerable portion of the total deposits. Most surety companies agree that the public deposits should not exceed 25 per cent of the total deposits. Since the public funds are payable on demand and usually do not remain in the bank for a long period, they necessitate a liquid reserve. A change in political control may result in a sudden withdrawal of public funds from a bank. Very often the bank must provide collateral as security for carrying public deposits, which also depletes the reserve.

5. *Ratio of Capital Funds*[14] *to Deposits.* There should be some relationship between the amounts of capital funds and deposits. The capital funds serve as a margin of safety for the depositors. As the amount of the deposits increases, the amount of capital funds must increase to maintain the margin of safety. On this point, Willis and Edwards[15] say: "It is generally accepted that a bank which shows a ratio of less than 5 to 1 between deposits and capital investment is conducting too small a volume of business for the capital investment. On the other hand, a bank which shows a ratio of more than 10 to 1 is conducting too large a business and should increase its capital, as the high ratio does not provide sufficient margin of safety in the event of the bank's failure."

Surety companies do not like to see the ratio between deposits and capital funds exceed 10 to 1, and some do not like to see the ratio less than 4 to 1.

6. *Bills Payable and Rediscounts.* These items indicate that the bank is borrowing money, either rediscounting some of its paper or borrowing against its bonds as collateral. Borrowing is quite a common practice, especially during certain seasons of the year when local conditions demand more working capital. Seasonal borrowing is not serious unless it is extreme, but chronic borrowing is not so favorable. If bills payable and rediscounts amount to more than 50 per cent of the capital and surplus of a bank, most surety companies apparently hesitate to write a depository bond for it. It also is considered an unfavorable sign if the bills payable and rediscounts exceed 15 per cent of the loans and discounts.

7. *Loans and Discounts.* This item is one of the most important in the financial statement, and is one of the most difficult to analyze, especially by the average layman. The loans may be slow, or frozen, or even worthless, but the financial statement may not indicate the true condition. The loans and discounts of a bank should be diversified rather than extended to a single line of industry, for a depression in that industry might "freeze" the paper. Excessive loans to officers of the bank or to affiliated commercial enterprises are unfavorable.

In general, the loans and discounts should not exceed the amount of deposits.

8. *Bonds and Securities.* A substantial part of the bank's resources should be invested in marketable bonds and securities. They serve as

[14]Capital funds include capital, surplus, and undivided profits.

[15]Willis, H. Parker and Edwards, George W., *Banking and Business*, p. 195.

(Concluded on Page 128)

The Fallacy of Homogeneous Grouping

Chester Newlun, Ph. D., Director of Training School, College of Education, University of Oklahoma

Cure-alls, so called, and alleged infallible remedies for particular ailments have their appeal. Many persons have succumbed to the lure of the blurb on a label, have even written testimonials indorsing the claims of patentees of marvelous (?) remedies, testimonials which frequently have been given wide circulation after their authors were quietly sleeping under little read epitaphs. Man in his hope for an easy, quick, and sure way out of the intricacies and problems of life is prone to accept rather absurd claims, especially when they are clothed in plausible and high-sounding language, arguing that a particular product has the indorsement of science. How many people are preventing sore throats with "Luckies"!

In the field of education, human nature seems to be running true to form. Education, too, seems to have discovered its cure-all purported to be a child of science. A worthy development of science in education has become through misuse by those for whom apparently "a little knowledge is a dangerous thing" distorted to uses and purposes almost if not entirely as foreign to its true functions as are the so-called preventive potentialities of the aforesaid "Luckies."

Basis of Present Belief

The writer is referring to the delusion of "ability" or "homogeneous" grouping of children in schools and the misuse educators are making of the I.Q. Numerous computations of coefficients of correlation between I.Q's. and school achievement, between measures of attained knowledge in two subject-matter fields, and so forth, have yielded positive r's of from about 40 to 60 between such items. This means that there is a *tendency,* when large numbers of individuals are concerned toward mental traits going together, that is they *tend to,* have an inclination to go together. But when this fact was first discovered, r's of 40 to 60 were considered rather high, whereas, as a matter of fact, they are rather low. (See any authority on educational statistics as to the use of the formula, $1 - \sqrt{1 - r^2}$.) It was argued since mental abilities go together (note "tend to" is deleted from statement) and since all traits respectively go with ("tend to" again deleted) I.Q's, (how plausible it was to say!) that one could, by utilizing I.Q's, of I.Q's. supplemented by other measures, separate children into ability groups — put all the brightest together, and likewise all the dullest and all those of average ability. After this, one could give enriched education to the brights, ordinary to the ordinary, and (heaven have mercy!) dull to the dull. Intelligence as a general ability was stoutly asserted, but on other occasions it was also asserted that transfer of training is impossible. Thus one follows the tortuous trail of the logic involved.

If someone here and there for philosophical, social, or purely humane and common-sense reasons presumed to question the practice of "ability" grouping, he was silenced by the argument that when science and sentiment conflict, science is likely to be right. And so this herding of children into "ability" or "homogeneous" groups on one basis or another has been spreading over this land of ours. He who has been doing it believes he has the sanction of science. Of course he has! Didn't Thorndike prove that mental traits go together! Strange how the two little words "tend to" can be so completely forgotten and ignored.

What Science Has Found

The writer will not in this article discuss many obvious arguments against this now rather widespread practice of grouping children. He will merely summarize the findings of recent researches which reveal that science does not smile so benignly on this separation of the sheep and the goats, as has been supposed. Indeed science is an impersonal god, who is not perturbed by false reports and rumors and will, if opportunity present itself, as quickly upset one cherished belief as another.

So far as the writer knows, the first person to discover that scientific data literally cluttering up the records of school-research bureaus would, if studied, throw some light on the practice of "homogeneous" and "ability" grouping, is Dr. J. R. McGaughy, Teachers College, New York. He set on foot and directed several investigations, one of which is recorded in the Ph.D. dissertation of Marvin Burr,[1] who found that after grouping has been carried on, four fifths of the total range of ability in the original undivided group remain in each of the subdivided groups. Alice V. Keliher in another study concluded that homogeneous grouping is not in accord with progressive theory nor with recent facts brought to light by biology, physiology, and mental hygiene.[2]

T. Luther Purdom, of the University of Missouri, carried on an extensive controlled experiment to determine the value of homogeneous grouping in high school. He found that pupils in homogeneous groups do no better than pupils in heterogeneous sections, cover no more subject matter, have no fewer failure, and put forth no more effort.[3] In the light of the findings of Burr and Keliher is it any wonder that Purdom found what he did?

The writer has sponsored some researches that have verified the findings of Burr. In one, a recent study to discover the validity of homogeneous grouping in junior-high-school English, Mrs. Marguerite Connett used data from 2,820 Oklahoma students enrolled in an excellent school system which practices ability grouping. Mrs. Connett evaluated the results of grouping these pupils. First she separated each grade as a whole, and then each grade for each school, into three nonoverlapping groups on the basis of I.Q's. and found the extent of overlapping of the three groups in each of five English traits for which she had the measures. She repeated the process by grouping on the basis of mental age, again on the basis of chronological age, and then on the basis of each English trait. Thus she used eight different bases for grouping to find which, if any, provided an adequate basis for grouping. Her findings are:

Heterogeneous English Grouping

"Grouping on any basis does not reduce, to any appreciable extent, the range of individual differences in the various specific English traits of junior-high-school pupils.

"The pupils, after they have been grouped, present very much the same problem to the classroom teacher as they did before they were grouped.

"Each English trait apparently is quite highly specific, and grouping for one trait does not necessarily imply that even the subdivisions of that one trait are covered.

"While the pupils in the high group in English average higher in a given trait, and the low group lower, the study reveals no appreciable decrease of individual differences in either group.

"The study shows that grouping on any basis gives a very small percentage of pupils who did not make overlapping scores.

"The findings justify one in concluding that so-called homogeneous grouping in junior-high-school English is after all merely heterogeneous grouping."[4]

One is reasonably safe in saying that homogeneous grouping is a delusion, never supported by scientific facts, common sense, or justice. It falls into the class of "remedies" which falsely claim the endorsement of science. Children, no matter how grouped for school purposes, are heterogeneous; and though the mean of one group may be higher than that of another, the variations and range of differences within the groups will be almost coextensive in every instance. Moreover, the rank of an individual child in one trait is no guarantee of his rank in another.

School executives, being on the whole conscientious and imbued with the ideal of service, will, the writer predicts, rapidly abandon this practice when they finally learn the truth about it. Perhaps those in the clutches of a complex, which serves as a compensation for an inferiority conviction, will be reluctant to relinquish what to them is such a satisfactory outlet for their repressions.

[1]Burr, Marvin, *A Study of Homogeneous Grouping in Terms of Individual Variations and The Teaching Problem.* Doctor's Dissertation. Bureau of Publications, Teachers College, Columbia University, New York, 1930.

[2]Keliher, Alice V., *A Critical Study of Homogeneous Grouping.* Bureau of Publications, Teachers College, Columbia University, New York, 1930.

[3]Purdom, T. Luther, *The Value of Homogeneous Grouping.* University Research Monographs, Number 1. Warwick and York, Baltimore, 1929.

[4]Connett, Marguerite, *Ability Grouping in English in Junior High School.* Master's Thesis. University of Oklahoma, 1930.

A TYPICAL CLASS IN A PHILADELPHIA GRADE SCHOOL
Everybody is busy even though the teacher is engaged with a small group not visible in the illustration. The children in the corner are making free use of the classroom library.

The Part-Time School Psychiatrist

John G. Rossman, Superintendent of Schools, East Chicago, Indiana

To keep the school child mentally well is just as significant as to keep him physically well. In the public schools of the United States, medical doctors and school nurses are performing a very distinct service for the physical welfare of the school child, both in the preventive and in the curative fields. No school city would dare lay claim to a program of meeting present-day needs if it did not include in its organization a medical staff. Up to the present time, however, very little attention in any scientific way has been given to the mental health of school children.

Mental Ill Health Increasing

Modern cities, with their noises and crowds, their speed of life, the close proximity of fellow to fellow, the keen competition and the everlasting grind, are taking a toll far greater than the rural quietude of a generation ago. New York state has a ratio of 374.6 per 100,000 in its insane hospitals; Arkansas has 83.1. The country average as shown by the 1920 census is 220.1.[1] There are in the United States some 200 public hospitals for those ill of mental disease (insane) maintained by the various states or by the Federal Government.[2] This number does not include the feeble-minded, the epileptic (except in certain instances), or those suffering from neurosis.[2] There are admitted to these hospitals each year 70,000 *new patients*. In the state of New York alone there is an annual net increase of 1,891 patients (1927).[2] Authorities tell us that this ratio is rapidly increasing throughout the nation. Nor is the increase confined to adults. The same persons inform us that 15 of every 100 school children are not in normal mental health. The Cincinnati survey shows that 2 out of every 3 children who came into the juvenile court of that city were suffering with mental disorders.

Teachers and parents have long since been conscious of the child who is irritable, or queer, or emotionally unstable, or markedly self-conscious, or a victim of fears, or subject to obsessions, or out of adjustment in some way. Growing out of this lack of adjustment, much unhappiness has resulted both for the individual, the parent, and the community. In almost all of these instances these symptoms have had to be well developed and the habits decidedly established before they were recognized. Little has been done to prevent them, and very little more to cure them. As a matter of fact, until very recently little was known either as to cause or cure.

Schools have in many instances placed the blame upon the home and its environment. No modern school administrator, however, would claim that the school has not materially contributed in the development of certain of these maladjustments. The very nature of the school and its organization causes clashes in these young lives. Its close contacts, its rather rigid rules and regulations, its mass treatment, its scheme of teacher domination, and its fixed standard of promotions tend to develop personality complexes.

A Practical Inexpensive Program

This article is an effort to show briefly how in certain particulars one school city is taking initial steps to better the mental health of its pupils and is doing so at very little cost to the taxpayer. It may also suggest how a similar program may be instituted in a city of any size, or even in a county unit, provided that the location is relatively near to a large urban center, and that the city or county has employed or is willing to employ the other persons necessary,

[1] *The Hygiene of the School Child*, Terman and Almack, p. 291. Houghton Mifflin Co. (1929).

[2] *Mental Hygiene*, p. 225, Vol. XIV, No. 2. April, 1930.

The employment of a psychiatrist in the schools of a small city is exceedingly valuable as the present paper indicates. The author was for many years connected with the Gary, Ind., school system and is responsible for many interesting innovations in his work. — *The Editor.*

such as the social worker, the medical specialists, and the psychologist. In most cities these persons are already on the staff.

Two years ago, the school city of East Chicago, Ind., employed the part-time services of a psychiatrist who came to the city for one-half day each month. This program was set up wholly in an experimental way and with considerable doubt, on the part of all entering into it, as to its worth. It proved, however, to be of great promise. As a result, last year the services of Dr. Harold S. Hulbert, a nationally known psychiatrist and alienist, were employed for bi-weekly periods of one-half day each time. Dr. Hulbert has his office in Chicago and was willing to accept the assignment from the standpoint of studying the development possible. The cost to the school city has been $500 for the school year.

How The Clinic Operates

The clinic which was established is rather simple and effective in its operation. Teachers and principals are instructed to be very observant in selecting cases. When the teacher reports a case and the principal confirms it, the child is referred to the school medical staff. A very careful study of the physical condition and history of the pupil concerned, and frequently of his parents and brothers and sisters, is made. In the meantime, the visiting teacher prepares a study of the social history of the family, and the school psychologist delves his scholastic record and gives such additional mental tests as may seem necessary to understand the pupil's behavior. All of these data are gathered and arranged by a well-trained visiting teacher who is in charge of the clinic. They are sent to the psychiatrist several days in advance of the clinic so that he may make a careful study of the facts presented. When the clinic convenes, the pupil is called in and given a thorough check-up examination. This at times is private and at other times before the visiting teacher, the nurse, the dean of girls or boys, as the case may be, or other persons interested and able to contribute to the solution of the problem the pupil presents. When advisable, even the parents are called in either to aid in the study of the problem or to profit by instructions as to treatment.

All this requires very close and intensive coöperation, but the results seem to justify the effort. The best outcome of the practice is to be found in the report compiled by Dr. Hulbert and Mrs. Carolyn Andrews, the visiting teacher in charge of the clinic. Portions of this report covering the work to May 1, 1930, have been selected and are appended to this article.

A Four-Year Cycle

The clinic now seems beyond the experimental stage. The board of education is convinced of its effectiveness and a four-year cycle of work has been outlined. It is estimated that 15 per cent of the East Chicago school population of 9,000 pupils are more or less maladjusted from a personality standpoint. The great majority of these, or about 12 per cent of the whole, are not clinic cases. In many of these cases a solution is to be found when the attention of teachers, parent, and principal is intelligently focused on the minor maladjustment. A minority, however, about 3 per cent, or about 270 children, need to be studied intensively, and, if possible, readjusted through the clinic. About three new cases can be dealt with at each clinic and two or more old cases checked up. Twenty clinics are held during the year. Thus in the course of four years most of the present cases can be contacted. This four-year program can only be regarded as tentative. As in all such movements, the more attention given to these personality studies the more need for treatment is discovered. Even now there are many cases on the waiting list.

Other Problems

During the next year, 20 per cent of the psychiatrist's time is to be assigned entirely apart from the clinic in consultation and in disseminating educational propaganda. At the present time, some principals "have no cases." They need to be brought into a clearer understanding of what the opportunity is. To some teachers almost every child is maladjusted. Some teachers, themselves maladjusted, become serious offenders against pupil personality, not intentionally, but through failure to understand what is involved. The school itself is beyond a doubt making or at least advancing many cases of dis-organization. The psychiatrist, in his report, indicates that the 35 per cent of the cases studied, the teacher did not regard the case as other than a disciplinary one, while in reality discipline was merely a symptom. He recommends that in 80 per cent of the cases the school modify its treatment of these pupils. The whole program of following up the cases after the clinic needs to be further developed. To meet these problems and others, this specialist will meet in conference with principals and supervisors. He will be asked to go into the classrooms to note conditions operating harmfully. He will study pupil programs and any other factors thought to influence the mental health of pupils.

In the report appended, it is stated that 55 per cent of the cases need domestic treatment; that is, the home life of the child needs to be altered; that 60 per cent of the cases need social treatment; and that 18 per cent should be transplanted to another environment. In outlining the reasons why children become problem cases, the matter of health ranks first as a contributing factor; the matter of home as the second; and the matter of environment as the third. The school ranks fourth and lowest. If the school is to prevent mental maladjustment, it must align as its allies the home and the community. It can do little without these. Therefore, as part of next year's program, the psychiatrist will be brought into touch with community leaders not only to point out needs for a curative procedure, but also to help to develop a preventive attitude. Not a little can be done if parent, teacher, and community leader begin to think along the same line.

The Psychiatrist's Report

The following represents adaptations from the report of the psychiatrist and the visiting teacher.

"During the first seven months of this school year, fourteen clinics have been held. The average number of pupils examined at each clinic has been three. Thirty-four children have been thoroughly studied. Three others have been studied sufficiently well to meet their own problem. Most of the contacts made with these cases have been made through the agency of the principal's office and the medical department. Several, however, have been made upon the instigation of the children's parents and a few children have come in voluntarily.

The Goal of the Clinic

"The goal of the clinic is to use all modern scientific methods to learn in 'What manner of child is this and why is he this type,' and hav-

ing learned to use such procedure as past cases indicate has been most useful in improving children of these various types. In the procedure it must always be recognized that some children, due to conditions which cannot be changed, such as poor inheritance, organic brain disease or mental disease too far advanced to be aborted, have a limited prognosis. No method of handling is going to make some children healthy and normal children. It must be admitted that with our present knowledge, some cases are hopeless. In the cases studied so far in this community, about 45 per cent cannot be redirected to advantage. In 55 per cent of the cases, it is reasonably possible to make the individual a successful pupil and later a successful citizen, provided the school, the home, and the available social agencies coöperate along the lines indicated.

Physical Pathology

"The closest correlation between conditions found in the clinic and conditions otherwise observed is in the matter of health. Six per cent of the cases were in good health and 94 per cent of the cases have physical defects. Some of these defects were serious and some were minor, such as bad teeth. Thirty per cent of these defects could not be altered by medical treatment and 70 per cent could be altered or improved by medical treatment. This observation is in accordance with observations at other child-guidance clinics and other board-of-education studies. The really healthy child seldom is a problem child. The unhealthy problem child as a rule tends to remain a problem child as long as he remains unhealthy.

"From the studies made, in 66 per cent of these cases the child's health affects his schoolwork or his individual life and in 15 per cent of the cases, some being duplicates of the previous number, the child's health affects his mind, and in 40 per cent of the cases, the child's health affects his social life. In 30 per cent of the cases, the child's health will affect him in the future in an economic way. It is recommended that great encouragement be given the department of health of the board of education and the board of health of the city so that there will be fewer cases of physical defects in children and more self-supporting citizens when these children grow up.

Home Conditions

"Various homes contributed to the problem which the child presented in 90 per cent of the cases. In only one case was the school wholly responsible for causing the problem, but in 25 per cent of the cases the school contributed to the cause, although the home was also a factor. Studying this from another angle, we find that in 10 per cent of the cases there was failure on the part of the teachers or school administration to meet the problem which the child presented, in 42 per cent of the cases the school authorities did recognize the abnormality of the child, but in 35 per cent of the cases the school authorities did not recognize there was anything unusual the matter and regarded the child as a disciplinary case although discipline was not indicated in any of these cases and would have been an unnecessary burden to the child.

"Modern social conditions in the home enter into the problem in a marked way. In 12 per cent of the cases one parent was dead and the home broken. In 30 per cent of the cases the home was broken by divorce and separation. In 30 per cent of the cases there was a step-parent. In 30 per cent of the cases the parents or stepparents were overly indulgent and in 45 per cent of the cases some parent or other person in the home was overly severe to the child. Some children had both an overly indulgent parent or other relative and an overly severe parent or other relative. Twenty per cent of these children suffered from neglect, either neglect of tenderness or cruelty at home.

MR. W. H. KIRK
Superintendent of Schools, East Cleveland, Ohio

Treatment

"Types of treatment vary greatly. In some cases and particularly in this clinic, emphasis is placed on what the school people can do in educating and developing this individual child. It may be that the teacher should forbear to call on the child for oral recitation or he should be placed in industrial classes or should be placed with children of his own mental age irrespective of the mother's desire to have the child placed with children of his own chronological age, etc. It may be the treatment is social surgery, namely, transplanting the child to another home, requiring of course the authority and the coöperation of the juvenile court. It usually is partly medical treatment, for the psychiatrist particularly realizes how certain types of physical disorders appreciably handicap the mentality of the child although they do not handicap his general health very much."

Reasons for Poor Prognoses

A. K.—Poorly born, poor constitution; too frail, so cruelly treated at a home which has no tenderness that she has not developed tenderness but is permanently cruel or sadistic.

E. F.—Poor inheritance, constitutionally frail; quarrelsome home; inadequate supervision, poor health.

J. K.—Pre-dementia precox, he will be insane before he is 23 and shows symptoms now.

E. B.—Congenital defects in mind and body with others in the family showing hereditary defects.

P. C.—Mexican-Indian with crossed Mongol inheritance; uneducable, un-Americanable, and poor physical development.

J. R.—Congenital idiot.

C. W.—Psychopathic inheritance, plus old organic disease of the brain, delinquent who should have been sent to an Ohio reform school.

C. S.—Feeble-minded, committable, defective eyes, and considerable throat and nose disease.

E. S.—Subnormal mentally, poor home and home management. Inadequate supervision and becoming delinquent, disinterested in school.

E. A.—Feeble-minded and should not be in school. Half blind and no glasses. St. Vitus's dance and heart disease. Emotionally unstable.

L. M.—Impaired by inflammation of the brain from sleeping sickness or epidemic encephalitis lethargica.

J. M.—Poorly born, poor home supervision and example, poor physical development.

R. B.—Poor inheritance, probably tuberculosis, and subnormal mentally. Unstable and irritable.

R. D.—Poorly born, feeble-minded, poor constitution, becoming delinquent.

H. N.—Has been repeatedly ill, frail constitution, not a sturdy inheritance, poor home example.

B. R.—Very poor health involving the central nervous system.

HONORING ACHIEVEMENT

There is a growing tendency on the part of the American school public to recognize distinctive service rendered locally to the cause of education. Thus the contribution made by Supt. W. H. Kirk, of East Cleveland, Ohio, is recognized in a beautiful way by the people of that city. He came to East Cleveland at the age of 22, remained for 40 years, saw the school system grow from 125 pupils to 8,200 pupils. He guided the educational destinies of the communtiy with a safe hand, a sound mind, and a progressive spirit. No man can measure the beneficent influence which Mr. Kirk exerted over the several generations that came under his direction and guidance. The tribute consists of a life-size portrait, done in oil, which is hung in the junior high school, named after Superintendent Kirk. The tribute thus extended not only expresses an appreciation for a great service, but also reflects in a splendid way something of the finer impulses of the community.

TEACHER-TENURE

"In the field of school administration certainly no subject is more closely connected, both with the business and professional efficiency of our system of schools, than the subject of teacher tenure." This statement was made by R. S. Markwell, clerk of the board of education, Hays, Kansas. Mr. Markwell added:

"The teaching body of the United States is very unstable. The turnover is excessively large. In the first place, thousands of teachers leave the profession every year, while additional thousands change from one position to another. Yearly changes in teaching positions in certain states range from 30 per cent for a single year to 68 per cent over a three-year period.

Among rural teachers the per cent is even higher. The average teaching life of teachers in some of the eastern states is said to be slightly more than six years, while in the schools of Kansas the average is but between three and four years. The median tenure in the public schools of the United States is four years, while the median tenure of rural teachers is but two years. This means that thousands of inexperienced teachers yearly are conducting the schools of rural communities or are teaching in the classrooms of the graded schools of America."

Seating in Relation to Acoustics in School Auditoriums

W. K. Friend, Acoustical Engineer, Chicago, Illinois

Within the past 35 years the subject of acoustics has been raised from the darkness of conjecture and opinion into the beneficent light of exact engineering science. The pioneer work in architectural acoustics was done by the late Professor Wallace C. Sabine, of Harvard University, beginning with his classic investigation of acoustics in the Fogg Art Museum in 1895. From that time forth the science of acoustics has taken form mostly through the untiring efforts of Professor Sabine. His determination has encouraged many others in the field, and since his death, work has been carried on by a number of able scientists and engineers. Public-school officials and architects are realizing more and more the desirability of acoustical control, particularly in school auditoriums, and the layman as well has been quick to appreciate the importance of acoustics in the success or failure of school buildings.

Common Acoustical Defects

It may be well, before discussing in detail the important factors governing acoustics in auditoriums, to outline a few of the general problems and principles involved in architectural acoustics in order to form a picture of the subject as a whole. The acoustical defects in school auditoriums arise from (1) improper distribution of sound energy in the room, and (2) from excessive reverberation.

The first of these defects is the least common in auditoriums, and consequently little time will be given to discussing it. It includes such defects as echo, flutter, dead spots, and sound foci, which need not be described in detail. It is sufficient to say that, if a few general, well-established principles of room design are followed, improper sound distribution will not occur, and results will be satisfactory in this respect.

What is desired for satisfactory sound conditions in an auditorium is an even flow of sound energy to all parts of the room. If the room be large, say seating more than 500 persons, the floor should be inclined upward toward the rear of the auditorium. In all cases, the speaker should be elevated.

Balcony floors should be inclined at a sharper angle than the main floor. A point to be remembered in this connection is that those features of design which are conducive to unobstructed lines of vision are also conducive to the satisfactory passage of direct sound waves. Balconies should be arranged so that the opening or space between the ceilings and floors are adequate for the entrance of sufficient sound energy to the auditors in the rear seats under the balcony.

Large unobstructed areas of parallel walls are undesirable, as the sound is likely to get trapped between them, reflecting back and forth after it has become inaudible in other parts of the room. This is what is termed a "flutter."

Unusually wide, shallow rooms generally produce poor hearing conditions at the extreme front on either side of the stage. Domes in the ceiling have been generally condemned. If a curved ceiling be desired, the radius of curvature should not be less than twice the height of the room. This also applies to curved walls in relation to their corresponding dimensions of the room. The dimensions of a room need not bear a definite relationship to each other in order to produce satisfactory sound conditions. The best general outline for a school auditorium, however, is rectangular with the stage at one end. These are the important factors to be kept in mind to assure good sound distribution.

The Problem of Reverberation

The second and most important factor of good acoustics is reverberation. Excessive reverberation is the cause of probably 90 per cent of of all acoustical defects in rooms today, and is most conspicuous as a difficulty in school auditoriums. When a sound is produced in a room, it is reflected back and forth from the furniture, floors, walls, and ceiling, a portion being absorbed at each reflection until the intensity is reduced below the point of audibility. The ordinary plaster surface absorbs only about 3 per cent of the sound energy at each impact, the other 97 per cent being reflected.

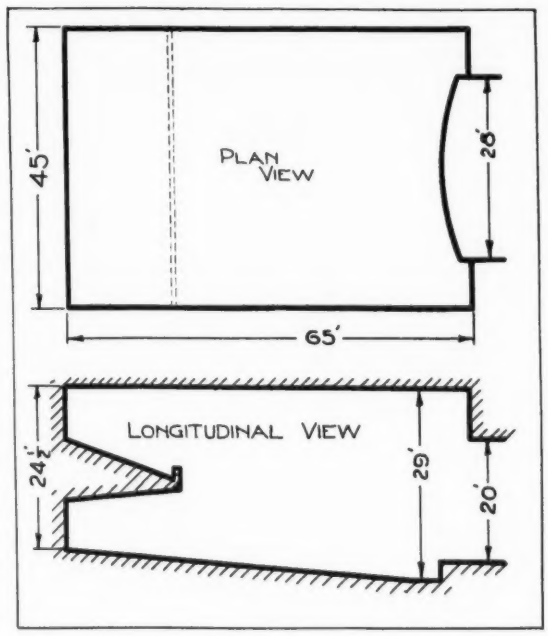


FIG. 1
Plan and Longitudinal Section of School Auditorium discussed in the accompanying columns.

Owing to the high speed of sound, which is about 1,120 feet per second, or equivalent to the speed of a rifle bullet, there may be many of the sound reflections in the course of a few seconds before enough energy is lost to make a sound inaudible. In such a case, the trail of sound following one syllable of speech or tone of music will not die out before the next syllable of speech or tone of music is uttered. This is what is called "reverberation." There is lingering of the sound with consequent confusion, in which nothing can be heard clearly and distinctly. This means that articulateness is greatly reduced and hearing is consequently difficult and tiresome. Reverberation has been termed a "hollow-barrel effect." An exaggerated condition of this phenomenon is found when one speaks down a well or cistern.

The means of correcting excessive reverberation is found in the installation of materials and furnishings which possess qualities that lessen the sound reflections by absorbing sound energy. If used in proper amounts and in the correct positions, these furnishings decrease the time it takes for each syllable of sound to become inaudible. Such materials are certain kinds of special wall treatments, upholstered seating, heavy drapes, rugs, etc.

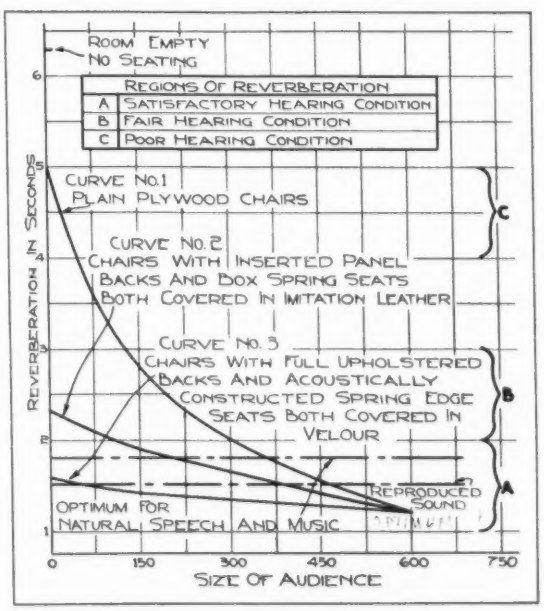


FIG. 2
Curves showing the reverberation time for varying audiences for three general types of seating, illustrated in Figures 3, 4, and 5.

Optimum Conditions

There is a certain upper limit value for the reverberation time in each room to which the reverberation must be reduced in order to have the most satisfactory hearing conditions. This reverberation time for satisfactory hearing is called the "optimum reverberation period." It is desirable in school auditoriums, for reasons which will be pointed out later, to obtain the optimum period even when there are few people present in the room. If such a condition exists, the reverberation will be above the optimum no matter how small the audience, and good hearing conditions will be consequently assured at all times. This statement, of course, is made under the assumption that proper sound distribution obtains. So far as audiences are concerned, a school auditorium cannot be too *dead*, or in other words contain too much sound-absorbing material, so long as the sound is sufficient to be heard satisfactorily in all parts of the room.

A problem that may well be considered here is that of extraneous noises. These may come from a number of sources, such as noisy seats, mechanical equipment in the building, reverberant foyers and corridors, outside traffic, etc. They tend to increase reverberation and interfere with audition, and consequently should be reduced as much as possible. It is impossible to satisfactorily discuss the correction of these troubles in this paper. Each type of disturbance is a difficulty in itself and requires specific treatment based on a study of the source of disturbance.

Relation of Seating to Acoustics

The type of seating used affects the acoustics in an auditorium more than is usually believed. As previously mentioned, proper seating is one of the tools used to correct excessive reverberation and is most effective, although the use of proper seating must often be accompanied by the use of the other treatments mentioned in order to produce the desired results. However, seating should be the first consideration. In order to illustrate the possibilities, a definite example will be given. The example of an actual case taken from the field illustrates the procedure which may be carried out in the case of a new school-auditorium design or a remodeling project.

Figure 1 is the plan and longitudinal section of a typical auditorium. The room has a volume of 75,000 cubic feet; it seats 500 persons on the main floor and 100 in the balcony. As is the case in most school auditoriums, very little sound-absorbing material is present in the form of drapes, curtains, rugs, upholstered chairs, etc. The plastered walls and ceilings and the cement floor have comparatively low sound-absorbing qualities.

Without going into the computations which were made in the acoustical analysis of this room, it is sufficient to say that all materials of construction used were given their proper acoustical evaluation. All of the materials of construction in common use today have been given an acoustical rating in the sound labora-

tory, or, in other words, their sound-absorption coefficients have been accurately determined, so that it is possible to compute the acoustical effect produced by any given amount of any constructional material.

FIG. 3
Plain Plywood Chair illustrating Curve No. 1 on Graph, Fig. 2.

Computations were made with three common types of seating in order to show the possibilities of acoustical control through seating. No effort was made to choose chairs particularly adapted to reduce the reverberation in this room. Laboratory data on all widely used types of seating and upholstery are available, and the most dependable figures were applied to the study of the room. The graph in Figure 2 shows the results of the analysis.

FIG. 4
Inserted Panel Back Chair, illustrating Curve No. 2 on Graph, Fig. 2.

The optimum time for this auditorium is 1.8 seconds for natural speech and music, and 1.5 seconds for reproduced sound. The optimum for reproduced sound is below the optimum for natural speech and music, because the intensity of such sound is usually higher than the average for natural speech and music, and consequently has a tendency to last longer before becoming inaudible. In case reproduced sound is used regularly in an auditorium, additional absorption is necessary in order to have this optimum obtained at a satisfactory "audience" point in order to insure good hearing. This point will become more readily understood as the explanation proceeds.

Seating to Improve Conditions

Curve No. 1, in Figure 2, represents conditions which will obtain in the room if plain plywood chairs are used. Here it is seen that the optimum for ordinary speech and music is not obtained until more than one half an audience is present, and that throughout the "low audience" range the reverberation is in excess of that allowable for satisfactory hearing. As reverberation becomes excessive, articulation becomes correspondingly poor, and hearing consequently more difficult and tiresome.

It is interesting to notice what the reverberation would be if the room were empty and contained no seating. This is 6.3 seconds, as indicated in the graph.

It will be noticed that the reverberation varies with the size of audience, the reverberation becoming less as the audience increases. This is due to the inherent high absorption qualities of the auditors — of their clothing, hair, etc. In the case of the plain plywood chairs, just mentioned, the hearing conditions change from very poor to noticeably better as the audience in the room approaches capacity. Changing acoustical conditions, as pointed out, are undesirable, and it is possible, through the use of

FIG. 5
Full Upholstered Back Chair illustrating Curve No. 3, Fig. 2.

different types of seating, to prevent most of this change. In order to have good hearing conditions, with a limited audience and still have approximately the same conditions with a large audience, it is necessary to have as much absorption as possible built into the chairs and so designed that it is cancelled when the chairs are occupied, the absorption of the chairs being replaced by that of the auditors. This arrangement prevents the amount of absorption in the room from changing rapidly with the changing size of the audience, and thus prevents the undesired modulation or changing of the sound conditions.

Upholstered Chairs Better

Illustrating this, Curve 2 in Figure 2 shows the effect upon the reverberation, of chairs with inserted panel backs and spring-edge seats, both covered in imitation leather. The curve has been flattened out considerably over the curve for the plywood chairs, and approaches more nearly the flat optimum which is desired for ideal conditions. The optimum for speech and music is actually obtained at a "one-third audience" and even at "no audience" the reverberation is but .5 seconds above the optimum. In this particular room, in the event reproduced sound was not used, these chairs would give satisfactory results under almost all conditions. It would be better, however, to cover the inserted panels in the backs with velour instead of imitation leather. This would add absorption and reduce the reverberation to practically the optimum for "no audience."

With all of the facts at hand concerning the acoustical properties of chairs, however, as are now available, a suitable combination in chair construction can be made to fulfill almost any requirement in a given room. It is necessary, particularly in school auditoriums, that the reverberation at "no audience" be at very near the optimum, since these rooms are often used for rehearsals and for the instruction of small groups. It is particularly necessary that rehearsal conditions simulate performance conditions, otherwise student actors are required to make a conscious effort to adjust their renditions in order to produce the proper reaction to themselves, because of the difference in "sound atmosphere" existing under the two conditions.

Other Controls

Curve No. 3, illustrates the further control which can be secured through the use of seating. The curve is for chairs with full upholstered backs and acoustically constructed spring-edge seats, both covered with velour. In case this particular auditorium is used for reproduced sound, these chairs would give ideal conditions for all audience sizes, as the graph shows. Whether velour covering for seating is desirable in a school auditorium involves problems not in the scope of this paper.

Figures 3, 4, and 5 are illustrations of the chair types used in the study from which the curves in Figure 2 were developed.

Nothing has been said about other types of acoustical treatment in this auditorium, as none is required. If the point at which the curves meet for maximum audience had been higher up on the graph, outside the range of satisfactory reverberation, acoustical wall treatment or materials producing the same effect would be necessary. Such treatments, however, are at a disadvantage if used in place of upholstered seating, in that, due to their position, their absorption is not cancelled with an increasing audience. The absorption consequently builds up in the room as the audience increases, producing an undesired modulation of the sound conditions. Additional types of treatment on walls and ceilings, however, are sometimes needed in order to bring the balancing effect produced by the proper seating down with an acceptable range of reverberation.

RELATION BETWEEN SCHOOL BOARD AND TEACHER

"Since the school-board members, the teachers, and the parents have but one objective — namely, the mental, moral, and physical welfare of the child — their interests are reciprocal and mutual," said W. C. Thomas, member of the board of education of Montgomery county, Kansas, in a public address recently. He continued:

"The best illustration, I can think of, to note a complete coöperation, is the modern motor car. While the various cylinders fire in unison the motor hums a merry tune and you obtain the maximum of power, but let the various cylinders fire out of time and trouble ensues with little or no power delivered.

"The school board, then, should be willing to coöperate by providing necessary equipment, thus doing away with the necessity of the teacher holding pie suppers to obtain necessary equipment and also by standing back of the teacher in enforcing discipline. They should work for the good of the community as a whole and not just for their own selfish ideas.

"The teacher should have tact and a pleasing personality, especially the latter, for without interesting the children an advanced education will likely be without results, in other words, a teacher should consider his vocation as a calling and not a job.

"As school-board members we must remember that we are dealing with a problem that has to do with the very lifeblood of the greatest nation on earth. In other words, it is comparable to a great factory whose raw material is budding youth and whose output is finished manhood. The value of this manhood to the nation lies largely in us — will it be criminally minded, open to the pangs of communism and anarchy or will it uphold the traditions of these grand old United States of America?"

Maladjustments in School Administration

I. O. Friswold, University of Minnesota

Writers on problems of school administration have expressed themselves frequently on the importance of making a distinction between what are termed *executive functions,* which constitute administrative duties to be assigned to the superintendent and his technical assistants, and those termed *legislative functions,* which should be exercised by the school board. The latter have to do with deliberative actions such as the adoption of rules and regulations, approval of courses of action, determination of policies, and other acts requiring legislative sanction, as contrasted with the actual execution of school-board policies and the performance of administrative duties. The pros and cons for making this distinction have been discussed at length in educational literature.

We have heard discussions of executive functions and legislative functions and have read of them so often that they no longer arrest the attention nor arouse the interest of many of us. It would seem that all superintendents and school boards would now appreciate the distinctions to be made between the duties of the superintendent as contrasted with those properly within the province of the school board. Experience, however, tends to confirm the belief that many school superintendents and more school boards are blind to the importance of these distinctions as factors contributing to the elimination of friction between individuals, expediting school business, and otherwise promoting the welfare of the school system.

Of course, we must recognize that effective coöperation in the administration of a school system involves both the superintendent of schools and the school board. We might well add that janitors, teachers, other employees, parents and pupils are also involved, but we are here more concerned with the relationships which exist between the superintendent and the school board who are obviously more directly concerned with problems of school administration.

Causes of Maladjustment

Maladjusted school systems are not uncommon. In every one of our states, we must conclude that there are too many of them. Perhaps a superintendent of schools, even though well informed of what is desirable, may be powerless to improve matters (except painfully and only after the lapse of a considerable period of time) because of the attitude of his school board. Perhaps it is the superintendent who proves to be a stumblingblock in the realization of the ideal relationship so much to be desired between the superintendent of schools and the board of education. At least, it can be said that the superintendent is often guilty of contributory negligence if he fails to attempt to do anything which may be within his power to secure a sound relationship between himself and the school board upon which to base the successful management of the school system in which he finds himself.

Although admittedly a narrow definition, we may define a maladjusted school system as one in which a proper personal and professional relationship does not exist between the school board and the superintendent of schools. Causes of such maladjustments are various. On the one extreme, we find a type of school board whose members are ignorant of the need for a trained intelligence in the promotion of an educational program. It blindly interferes with instructional problems with which only the professionally trained teacher or supervisor can hope to cope successfully. This is the type of school board which selects teachers, purchases supplies, selects textbooks, and, in some instances, even attempts to decide the content of the courses to be offered and the methods to be used, without consulting with the principal or superintendent of schools. Business matters pertaining to income and expenditure are likewise reserved by the school board as sacred to itself. The superintendent is not encouraged to attend board meetings and may even be told that his presence is not desired.

Correct principles of school administration cannot be devised for the benefit of any one officer in a school system. They are the result of successful practice beneficial to the schools and the children. The present article indicates rather interestingly, how, through experience, some of the most important principles have been developed. — *The Editor.*

The Unwise Superintendent

On the other hand, we have the superintendent of schools who suffers from delusions of grandeur. He is obsessed with the idea that as a superintendent he possesses heaven-sent prerogatives which enable him to force his school board to adopt all his suggestions and abide by his judgment in all matters pertaining to the public schools. He feels that, unless the school board follows his initiative consistently and unquestionably in every particular, it is an unnecessary evil. He believes that his business sense is infallible, and that in the business affairs of the school district he should do and be all things in one.

Both of these extremes in school administration are perhaps overdone, but in some instances even these extremes are to be found. They appear to be equally absurd and both of them are dangerous to sound, progressive, and intelligent school administration.

In between these two extremes, however, we find many instances of maladjusted school systems. And it is in these that we encountered many interesting illustrations whose analysis might prove of value to the reader. With no pretense at illustrating all types of maladjustment, a selected group of cases illustrating unsatisfactory school board and superintendent relationships are presented for consideration. All of these cases have been gathered from authentic field situations in Minnesota and Wisconsin school systems.

An Incompetent Janitor

Case I. "Mr. A., an unmarried man, 60 years of age, had served as janitor for 12 years when the writer (a Minnesota school executive) became superintendent of the 'X' public schools. During the tenure of the three preceding superintendents this janitor had caused no end of trouble. Each of these preceding superintendents had sought to have him discharged, but in this they were unsuccessful. The writer worked toward the same end for four years, but met with the same kind of success.

"This janitor was partially crippled with rheumatism, so that as he would have been unable to do all his work properly even had he been inclined to do so. But, he was as lazy as the day was long and accomplished little.

"He was a confirmed scandalmonger and gossip, and made it a practice to go from one teacher to another, spreading gossip and gathering more as he went along. Teachers were constantly getting into unpleasant situations because of this.

"Often Mr. A. was discussed at school-board meetings. The board members seemed to realize that he was unfit for his position as janitor. At least once each year he was called on the carpet before the board and told just what was expected of him — this in addition to the innumerable times the superintendent spoke to him — but these 'show-downs' had no discernable effect.

"The building was a disgrace and the boiler room a veritable fire trap due entirely to this man's lack of care. Practically every letter from the State Department of Education which followed the annual visitation by an inspector referred to this unsatisfactory janitorial service and advised a change. Letters in the files for several years back carried the same advice. In spite of all this, Mr. A. was retained.

"Not until two years after the writer had moved to another school system was Mr. A. replaced by another man. Before this occurred, however, the school had suffered more than most people realized. Superintendents and teachers were sorely handicapped, but the pupils suffered even more."

We do not know how the various superintendents went about persuading the school board that the janitor in this case was not worthy of his hire, nor do we know just how much assistance the janitor received to correct the error of his ways, but that the school board was timorous and ineffectual in handling the problem which it faced is very clear.

Causes of the Trouble

In the first place, this illustration warrants the observation that the school board, either by preference or because of ignorance, retained, in effect, responsibility for the type of janitorial service the public schools were to receive. Instead, this responsibility should have been delegated to the superintendent where it properly belonged. As it was, the janitor was not amenable to the authority of the superintendent who sensed the necessity for efficient janitorial service more thoroughly than did either the school board or the janitor himself. Further, by dividing the responsibility of the janitor among the several members of the school board, as it did, the board brought about a decentralization of both authority and responsibility which explains, in large part, the unsatisfactory state of affairs which we are discussing.

In the second place, there appears to have been a singular lack of understanding and coöperation between the school board and the superintendent. Either the school board did not choose to comply with the recommendations of the superintendent, or the superintendent was remiss in exercising any professional leadership in this matter.

In the third place, the school-board members appear to have permitted factors other than their better judgment to determine their actions. Not that sentiment can or should be entirely divorced from the management of a small school system; but in this instance, patently, the school board demonstrated that it was "weak-kneed" rather than well-intentioned. Apparently, the school board preferred to regard the school system as an agency for the alleviation of individual incompetence rather than as an agency existing primarily to promote the welfare of the pupils who were in attendance.

An Insubordinate Janitor

Case II. "Mr. S. has been janitor of the 'Y' school for the last 21 years. During that time there have been 6 superintendents in the school.

"The present superintendent has been told by the board that he is to have full authority in all school matters. But, in actual practice, the janitor has complete control of all matters pertaining to the janitorial work and to building repairs. He apparently agrees with the superintendent when the latter is around, but takes matters directly to the individual members of the school board when he doesn't get permission to do as he wants to. He talks to two or three of the members, and if he finds that they do not

disagree with him out and out, he proceeds with his own plans, stating that he was authorized by the board to do so. This is then accepted by the board as a group, because they do not want to question each other's actions, even though they may not agree with the procedure.

"The replacing of windowpanes is an example of such a procedure. The superintendent gave the janitor a written order to purchase some windowpanes. He was asked to get the panes during the afternoon and to put them in after school that day. During the day the janitor interviewed two of the board members in regard to having the hardware store put in the windowpanes. They didn't object to the plan so he had it done that way. At the regular meeting of the board the 'labor' item on the hardware-store bill was questioned. The president of the board stated that the janitor had talked to him, and he understood that he had also talked to several other members, in regard to having the hardware store put in the windowpanes in order that the school district would not have to pay for any panes broken while they were being put in. The bill was then ordered paid with the rest of the bills listed, and no further comment has ever been made concerning it."

A janitor who has held his position for several years during which he has watched superintendents come and go, may become a powerful force in disturbing the smooth operation of administrative machinery. In Case II this appears to be true. First, although apparently well meaning, this school board does not seem to appreciate the significance of delegating "full authority in all school matters" to the superintendent. Second, it is guilty of one of the most serious blunders which school boards indulge in when it permits individual members of the board to exercise judgment and render decisions relative to school matters instead of insisting that all school business be conducted in board meeting with all members of the board acting together as a committee of the whole. Third, this school board, like many others, fails to recognize the necessity of centralizing responsibility and a commensurate authority in the office of the superintendent to secure efficient school management. Available evidence and the concensus of educational authorities indicate that the janitor should be made directly responsible to the superintendent and the superintendent, in turn, made directly responsible to the school board for satisfactory janitorial service in small school systems. Unless this is done, unsatisfactory conditions are virtually assured instead of avoided.

Finally, it would seem that in this case the superintendent of schools could remedy the situation by merely presenting a clear-cut analysis to the school board. We must acknowledge that every superintendent has a definite obligation to advise his board concerning the problems of the school, and in this instance it is surely true that some change should be made. Looking in from the outside, it seems incredible that such a situation as we are here discussing could ever have developed and become an established fact.

A "Superior" Teacher

Case III. "A man of wide experience has charge of a Smith-Hughes department in a small high school. He has held this position for eight years and during that time has served under four superintendents. He thoroughly understands the work of his department, presents it in an interesting manner and secures good results. He is exceptionally popular with the students, all of whom, even those in the grades, call him by his nickname. His pleasing personality, social qualifications, good nature, free distribution of his salary make him popular with the teachers. He is one of the most popular men in town. Outside of church work he is a leader in every community activity. He has refused the superintendency of the local school system, the county superintendency, and also positions in much larger school systems as he is well satisfied with his present position. He draws a good salary, which is $600 dollars greater than that of the superintendent. His popularity, together with the frequent changes in the superintendency, has led the town to consider him the most important man in the school system. A new superintendent is dissatisfied with the present standards of the school as a whole. He has made an attempt to raise standards, but the above man refuses to support the new policies as he believes that the present system is good enough. He also refuses to abide by requests for teachers' planbooks, arrival at 8:30, etc. The lack of coöperation here has its effect upon the remaining teachers. His popularity makes any appeal to the parents or board useless. What should the superintendent do?"

"Resign," would be the correct answer to the last question if one were not concerned with the welfare of the school nor enticed by the possibility of making an unsatisfactory condition into a better one. No superintendent can give his best services to a school system whose school board does not delegate to him full professional responsibilities and authority in the management of school affairs. It must be conceded that the most important duty a school board has to perform is to employ a capable school executive. Therefore, when a school board employs a superintendent whose professional qualifications it is unwilling to recognize by a suitable delegation of professional authority, it violates, flagrantly, its sacred obligation to serve the best interests of the community it represents.

Frequently superintendents accept positions concerning which they have inadequate knowledge. As a result, they discover after it is too late, to avoid a great deal of embarrassment and frustration, that they occupy a subordinate position in the school system which prevents them from discharging their professional obligations effectively. This is the picture which confronts us in Case III above.

A state of affairs such as we find in the foregoing case is not easily changed. Nevertheless, even in this case a satisfactory solution should not be impossible. The immediate problem which the superintendent must face is that of educating the school board to appreciate his professional qualifications and the services which he may be able to render to the public schools. If he cannot demonstrate to the school board that he is capable and that his judgment in school affairs is sound, he must expect to be relegated to his present inferior position. But if he can sell the board his plans for improving the school system, half of the battle will be won. Selling his plans to the teachers will be highly important, also, but the all-essential prerequisite is a proper understanding between the superintendent and the school board. With the right kind of enlightenment and coöperation, even the blindness, obstinacy, and idiosyncrasies of human nature can be overcome.

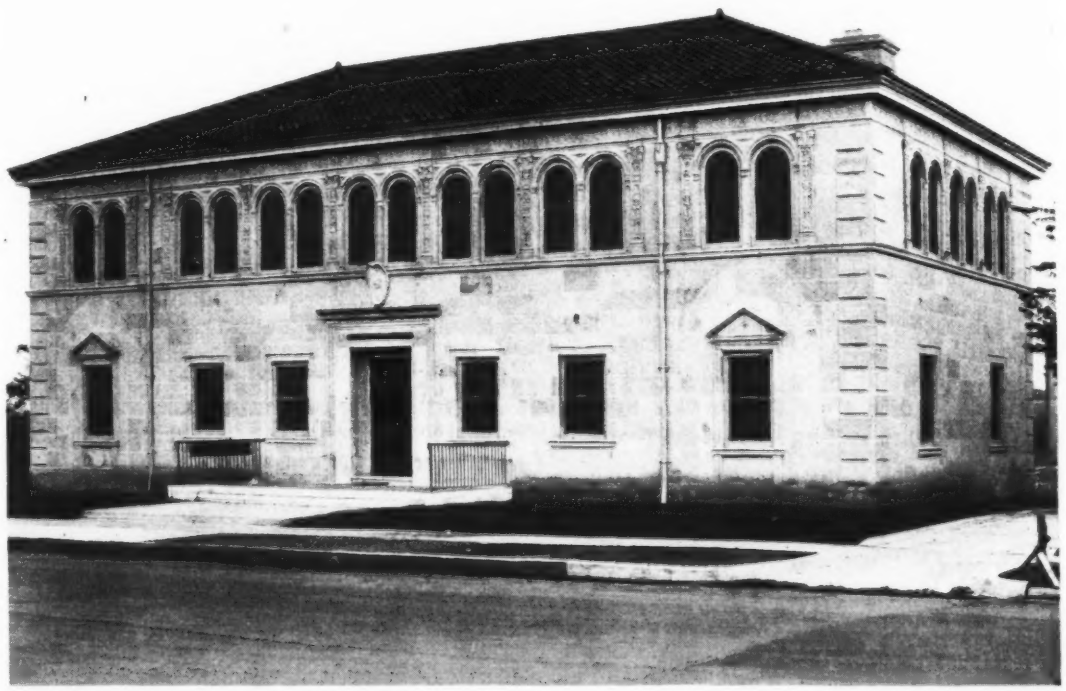
Improving School Standards?

Case IV. "A school board became dissatisfied with the deportment, industry, and scholarship in the school system. The superintendent was not reëmployed, and the new incumbent was requested to 'build up a better school system.' In the course of the superintendent's efforts to carry out this request of the board, several students were punished for misconduct and others failed for poor application to schoolwork. As a consequence of these measures, parents of the pupils brought numerous complaints to the school board. Members of the school board, ostensibly in order to remain on friendly terms with local people, asked the superintendent to resign at the end of the school year."

Many school superintendents are betrayed by the blind uninformed generosity of their school boards. This type of school board, in the most general way, suggests what it wishes the superintendent to accomplish, but after thus inviting him to swing into action, it takes no further responsibility for his acts. In all too many such instances the superintendent is a willing but blind victim until it is too late for him to withdraw unscathed from the difficulties in which he may become enmeshed.

In this case, the superintendent failed to present to the board his plans for improving the morale and performance of the pupils. He had no distinct understanding with the board relative to his own powers. If he had had, and this had been made a matter of record, the school board would have been compelled to sanction his acts.

(Continued on Page 128)



HEADQUARTERS BUILDING, TEXAS STATE TEACHERS ASSOCIATION, FORT WORTH, TEXAS
This fine, dignified structure, which was recently erected for the Texas Teachers' Association as a headquarters building, was completed at a cost of approximately $80,000. The building has been designed to permit the full use of the basement and two floors. It is constructed of Indiana limestone and is trimmed in quarter-sawed white oak throughout. The building forms the center of interest for the state educational interests and is of commanding prominence.

How Shall Teachers and Superintendents Be Selected?

Ernest E. Oertel, Newman, Calif.

"Whom shall we employ?" is becoming a question of greater importance each year to the superintendent of schools who is conscientious in his efforts to organize and conduct a progressive and purposeful school system. There is nowadays such a baffling avalanche of supposedly well-trained and practiced human material forcing its course upon him when vacancies are announced that his problem in selection is obviously much greater than it was when candidates were fewer and considerably less sedulous in attempts to "sell" their services.

Higher salaries for teaching have attracted new thousands to the profession in recent years, not a few of the newcomers being men. Teachers colleges and universities have been vying with one another in establishing enrollment records in departments of education, not thinking of the operation of the law of supply and demand in connection with their finished product. All types of persons have been enticed to enter teaching. There are thousands preparing for schoolwork now, who have very few, if any, of the requisite characteristics and traits that make for success in this profession. They are allowed to prepare themselves for the work, however, notwithstanding such deficiencies, because many engaged in teacher training fail to see even in this day that the modern teacher must be alert, versatile, a super-being in physique and intellect, sound in morals, and that weaklings must be deleted regardless of sacrifice to student or department.

The result of such a system of the wholesale production of teachers, good, bad, and indifferent, is that superintendents have before them an inexcusably large array of candidates for every position. It is ordinarily splendid to have opportunities to make selections from a wealth of a given material, but with human teaching material, numerical strength tends only to confuse. There is a great danger that the one selecting will look for a "type," an exponent of his personal fancy, as the easiest way to make eliminations.

Picking "Type" Teachers

Many school executives responsible for the selection of teachers have, consciously or unconsciously, a preconceived notion of what a teacher should be like. They sometimes have a mental picture of a "type" teacher with certain conventional characteristics. They visualize what they consider to be an ideal teacher, and this mental picture influences them in the selection of teachers for their staff. Potentially good teachers who do not measure up to these secret specifications are not considered. Thus it is that some school systems are peopled by teachers of one kind. Often the teachers in such places are so much like each other that they find it extremely difficult to get along together. Persons who are too much alike usually do not work to the best advantage in harness in any situation.

One of the most successful faculties I ever had was made up of teachers who were manifestly very different from each other. No two were alike. They soon recognized this state of affairs, made allowance for their disparities, and worked together very well indeed. One teacher was a purist, formal, always correct, decorous, a very social being. One was her very antithesis in all respects, roguishly witty and nonchalant. One young woman out for the first year was dangerously like a flapper; another was as close to being a prude. One was corpulent and inclined to be untidy; another emaciated and meticulous. These people were not selected because they looked like *a* teacher, but because they knew their subjects and liked teaching them to boys and girls. The work of the school as a whole with such a motly faculty was, it seemed to me, markedly superior.

The experience with this unusual staff of teachers has indicated to me the wisdom of being careful to look beyond personal appearance in selecting teachers. Aside from the fact that a kaleidoscopic faculty works together more harmoniously than one made up of "type" teachers, students must benefit more, it seems, from contacts with the former. They get different points of view and learn to appreciate different personalities. How deadening for a student to be exposed to five or six teachers each day, all with practically the same physical and psychical characteristics.

Personality Reading

Looking for a type teacher appears, then, to be a poor method to simplify the process of selection. A superintendent should be able, of course, to read some personality from what he sees of candidates. There is such a thing as being able to "size up" and estimate, approximately, the worth of a person merely by looking at him and talking with him. Some persons are much more expert in doing this than others. I know one superintendent, who, recognizing his inability to judge candidates in a single interview, invariably arranges to have his wife meet candidates for important positions. His wife happens to be unusually keen on getting everything in a glance. She is quick as a flash where he is phlegmatic; she gets the minutest details — the lines in the face, the little telltale movements of the fingers and the feet, the fit and degree of suitability of the gown or suit. He declares that in his experience covering a long period of time she has never erred greatly in evaluating persons whom he has inostensibly sent to her for the purpose described.

It is well to use any and all expedients that may help in evaluating teachers, but the standards should be objective as far as possible, and not subjective. If the person evaluating is biased in favor of a certain type of person, if he is narrowminded and provincial, if he does not see some good in everybody, and if he does not appreciate the fact that our world is by good fortune peopled by men and women with innumerable different characteristics, ambitions, dispositions, likes and dislikes, his judgment will be of little value in helping him gather around him a corps of coworkers who will supplement and complement him and who will offer a well-rounded education to students in his system of schools.

Aside from knowing personalities, the superintendent should check on abilities and skills. Here, too, he is not always the best evaluator. He should call freely upon his principals, supervisors and heads of departments for assistance in rating newcomers. If a teacher is able to teach, she should be able also to *do,* but this is not always conversely true. The superintendent may rightly expect of prospective teachers that they manifest a strong and wholesome personality, that they possess marked abilities and skills in a given field with some possibility for "doubling" in others for extraclassroom-activity purposes, and that they are genuinely enthusiastic about teaching and about schoolwork as a profession.

Promotions vs. Outside Choice

When a supervisory or administrative position is open, superintendents are frequently confronted with the question, "Shall we promote from the ranks or shall we reach outside for candidates?" Some school districts have a fixed policy in this matter. They always promote. None from foreign fields, regardless of pedigree, can get administrative positions. They must accept lowly places and work up. Votaries of this system say it promotes loyalty, encourages use of home talent, and makes for greater efficiency. Many times it seems unquestionably logical and right to promote the head of a department to a vice-principalship, the vice-principal to a principalship, the principal to an assistant superintendency, and so on. But at other times it is found that material really worthy of promotion is not available. When a fixed policy of elevating from the ranks is held to, it happens not infrequently that persons of inferior ability fall heirs to positions for which they are by no means worthy. That may explain why in some of our best school systems we are shocked occasionally to hear of a school executive who has been found guilty of some flagrant indiscretion, why some outstanding schools go "stale," why so much politics is done and so many charges of favoritism are made in places where this policy is in vogue.

It is probably valuable for any school system to have an infusion of new blood at intervals. A new teacher is stimulating. Other teachers and students profit from a different personality and a contribution of new ideas. Perhaps the new teacher is no better, no brighter, no more likeable than some of the old ones, but she is different. That alone makes her valuable. Select from home talent so long as the home does not suffer from the indulgence, someone has said. Beware of provincialism, self-satisfaction, and a sense of self-completeness. The superintendent who has his way will probably want to introduce new teachers into his system from time to time to avoid these obvious pitfalls.

Picking Superintendents

When boards of education find it necessary to select a school executive, they, too, face a new problem. To what extent shall they depend upon university nominations? In recent years appointment secretaries and heads of education departments in our state universities and colleges and in many private schools have by various means encouraged trustees to come to them for help when they are in the field for a superintendent or principal. They decry the system of free-lancing on the part of professional schoolmen who, in attempts to improve their position, make the customary "rounds" when they learn — nobody ever knows how — of an attractive opening. Some universities do not even expose boards of education to all of the available men registered or enrolled with them. They nominate their choice for a given position and expect the board to elect this person or go elsewhere for material.

This practice seems dignified. It saves many accredited candidates unnecessary and costly application trips. Moreover it saves the time of trustees. On the other hand, it is likely to make an autocrat of the appointment secretary or the dean of the education department and caddies of the registrants. Education departments may tend to earn reputations and become attractive to jobseekers on a basis of how many men they place. It is at least questionable if universities should become too obviously placement bureaus. It is conceivable, in the end, that school boards may be able to select a school executive from the open field with as much good judgment as the cloistered dean or secretary.

It has been said that school boards should not consider persons who come to them for a given position, but that they should make overtures to outstanding men already well placed and apparently content. If the feelings of other board members may be disregarded with impunity, and if the "big" man can remain "big" enough not to acquire the notion that he is not employed but commissioned, and if the bargaining board has funds enough, then this splendid theory may work.

Beware of Recommendations

In general, good ordinary business practice shows that it is safest and best to select professional workers from as wide a field as possible. Proper credentials are all-important these days, and should be checked on religiously. The matter of selecting a personality, once the credentials are in hand and ability guaranteed, probably should always be left to the individual or individuals who in the end are responsible for the results attained in the office they are seeking to fill and to whose credit or disparagement the good or bad name of that office must redound.

Persons responsible for selecting school officers have the right nowadays to be exceedingly wary about recommendations presented to them in behalf of candidates. The ease of acquiring flattering testimonials, even in circumstances where they are by no means justified, is well known. It is difficult to get true statements from employers concerning the work of candidates unless one talks or corresponds with them directly, and even then there is sometimes hedging and occasionally a deliberate attempt to "pass off" an inferior teacher by a process of sugar-coating. Appointment secretaries and teacher-agency directors admit a practice of deleting from the papers of registrants any letters of recommendation that are not complimentary. An employer of present-day school teachers who does not read between the lines of letters of recommendation presented to him in their behalf and who is not quick to detect misrepresentation, not apt to segregating ambitious mountebanks from earnest, thorough, scholarly workers, not trained to be practically as conservative, exacting, and noncommittal as the traditional hard-headed business man, is almost certain to be "taken in" sooner or later by black sheep in the profession.

The Occasional Trickster

Candidates themselves have little tricks they employ in attempts to secure positions, particularly when they are "working" on rural and small-town trustees. To illustrate, I shall describe one of the best of these I have observed. Applicant A makes the rounds of a certain board of trustees for a superintendency. He is in collusion with B, a personal friend, working near the school where A is now employed. When A has seen all of the trustees, he retires, clearing the field for B. B then starts the same circuit, but does not get all the way around. Sooner or later he discovers, usually when he feels he has reached the dominant member of the board, that A has already applied for the position he seeks.

"Mr. A is applying for this position?" questions B, in feigned astonishment.

"Why yes," answers the unsuspecting board member, "he was here to see me not over an hour ago."

"How strange!" declares B. "Well, if Mr. A is applying for this position, I wish to withdraw my application. I do not feel that I am worthy to hold a candle to him as a school administrator. I should be happy to be a principal or even a vice-principal under him if you succeed in getting him for this position."

B withdraws, surreptitiously meets A, and both go home.

I have seen this booster trick used twice, and once it worked beautifully. Verily there are black sheep in the business of teaching — persons who know little of professional ethics. This is a natural outcome, perhaps, of the stupendous growth and the radical expansion of the curriculums of the schools and the resultant accretion of all types of employees.

The Tenure Difficulty

It is becoming a real art to be able to select good teachers. The operation of tenure laws is making it more essential than ever that this art, this technique, be prized and nurtured. Those in charge of personnel management cannot know too well the human material with which they work, nor be too solicitous about preserving its quality. When, as is now actually the case in some places, a teacher can contumeliously snap her finger in the face of a helpless superintendent after she attains a tenure requiring only two or three years of probationary teaching, it is of paramount importance that the superintendent make sure that his teachers are fundamentally sound before he hires them. It is much easier to eliminate them then, than during the probationary period, and certainly infinitely easier than to attempt to do so by preferring charges once they have reached tenure.

The truth of the statement that the most important business of a board of education is to select its chief executive officer — the superintendent of schools — is becoming more apparent each year. In view of the dependence of the success of the functioning of a school system upon the composite worth of the people who are working in it, it may also be said without hesitation or qualification, that the selection of these coworkers — these people who execute for better or worse policies of the administration — presents by far the biggest and most important problem to be met by the modern superintendent of schools.

Study Halls or Detention Rooms?

By a Washington Superintendent

To an educational administrator who will but take the time to subject standard school procedures and methods to a cold, critical scrutiny, there will come the conviction that possibly the so-called "sheep mind" so happily described in a recent issue of a popular magazine may have been responsible for the adoption and continued use of many new and old ideas of school management.

This little article is inspired by a picture of a study hall in a late issue of the JOURNAL. This study hall is in a recently designed and constructed building, but it is so typical of the study halls in 90 per cent of the schools of our country as to serve as an example of the aimless practice in education of following the leader. In the picture mentioned, all the children seem to be busily engaged in studying in standardized fashion under the direction of a teacher policewoman who is standing at the side of the room.

The plans accompanying the photographic illustrations of this modern school indicate that the usual standard library, seating 10 per cent of the pupils enrolled, is in a separate room across the corridor, so that at one time not more than 75 of the 750 children may enjoy the advantages of library research. The children in the study hall, using the typical school desks with their comparatively small working surfaces, appear to be busy with their individually owned textbooks, together with the paper and fountain pens that constitute the usual working materials for the study period. No reference materials or library aids are in this room — it is a so-called "study room."

The thought occurred to me, as I glanced at the picture that there is a decided similarity between this picture of a modern standardized educational layout and those recent motion pictures of a well-ordered "Big House" or penitentiary where a certain amount of well-disciplined time must be put in under the direction of martinet guards.

What is wrong with the picture? The average educator will say, "Nothing. That is the way most of us handle our study halls and libraries." However, disregarding the sanctity of common usage in this regard, let us analyze the situation. On the assumption that the study periods should be made as valuable as possible and that every known aid in such a learning situation should be provided, let us study the setting.

When you, Mr. Superintendent or School-Board Member, sit down to do creative work under what you think is an ideal situation, what is the actual condition? Instead of a modern school desk with its small working surface, do you not use a table or office desk upon whose broad surface you spread all the books at your disposal, with as many pamphlets and any other helpful material as you can find? And do you not allow enough elbow room to do real work? If certain intricate points requiring additional information arise, you have but to take a few steps to your library shelves and, while the issue is a live one, you settle it. It is not necessary for you to ask permission or get a library slip, at the risk of breaking your train of thought. You do not walk to another room and go through all the red tape customary in a well-ordered school library.

The inference of the foregoing is that, contrary to ordinary school usage, the study hall should be made a place in which to work — a laboratory with all working materials on hand and with a genuine rather than a pseudo working atmosphere. A little change in the picture could effect this startling improvement, and yet, while educators will all agree in theory to this proposal, current educational practice proves that it is still a theory.

Library associations and standardizing organizations pass and enforce rules that every school enrolling a certain number of pupils must have a separate library room in which 10 per cent of the enrollment may be accommodated under the direction of a trained librarian. Decentralize the library, instead. Have many classroom libraries, and, in addition, bring the library to the study hall where it can be used by all of the pupils who are there at any one time to study. Line the walls with workable reference material, and thus develop a working library, accessible at a moment's notice to every pupil in the room. Encourage the pupils to get more out of the study period than a mere conning of the individually owned texts. Take a hint from your own method of work and provide table equipment on which pupils may lay out their working materials, textbooks, notes, reference materials, and pamphlets. Actually make the study period one of active value, rather than a detention period in which time flies so very slowly. In other words, use the study hall as a glorified library and do what educators have been advising for years — make the study hall a learning laboratory.

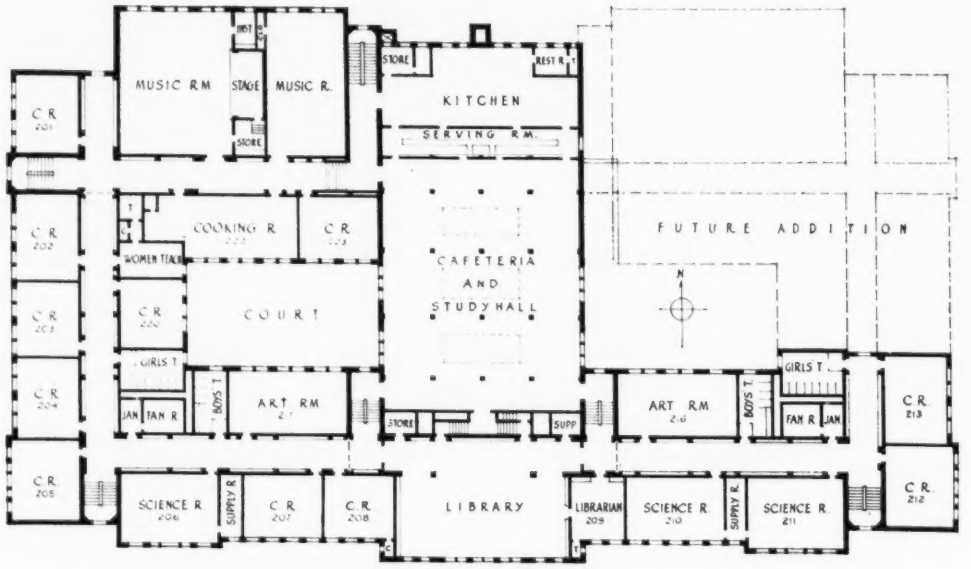
I submit that in the past twenty years, in spite of all of our talk about bringing the library-laboratory methods into use in high schools, there has been but little improvement so far as the old-fashioned study hall and the separate library with its 10-per-cent quota are concerned. If any school-board member or superintendent doubts this statement, let him visit the schools in the vicinity of his city.

The pathetic thing about the whole situation is that vast sums of money are spent yearly for new buildings, and but few improvements are effected along the lines mentioned. Only one thing more pathetic has happened in the writer's state, Washington: One school board built a quarter-million dollar building and by mistake left out both study hall and library. However, a cafeteria and a gymnasium were not forgotten!

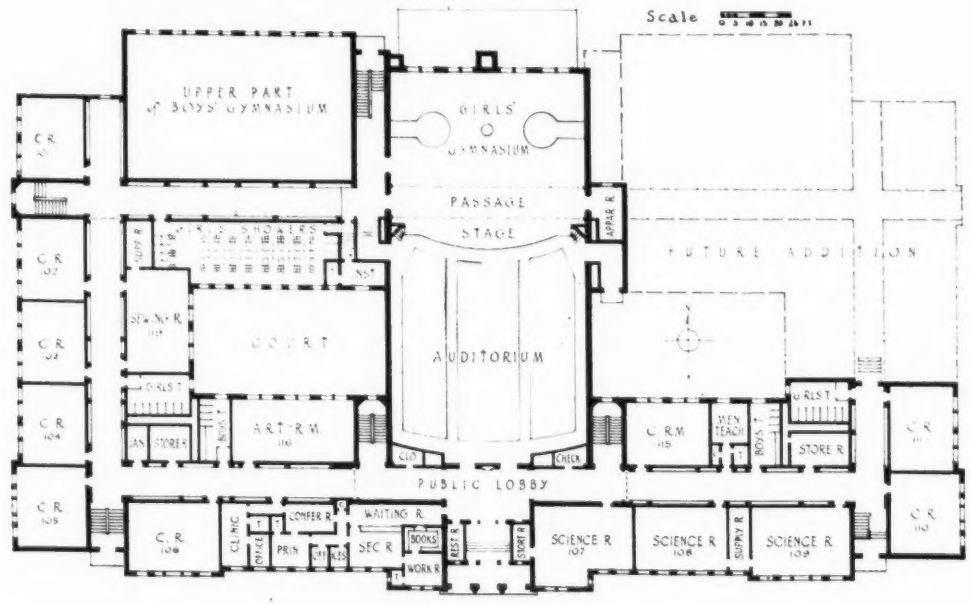
There are not a few educators who believe that the heart of a modern school is a well-conducted, usable library. May their number increase.

ENTRANCE DETAILS, MONTICELLO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO
John H. Graham and Company, Architects, Cleveland, Ohio

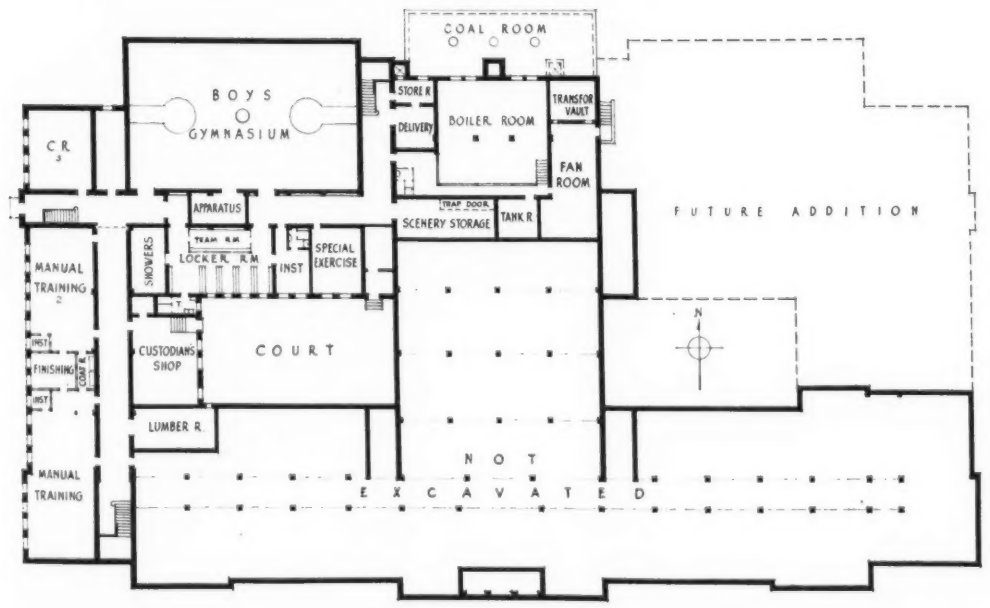
MONTICELLO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO
John H. Graham and Company, Architects, Cleveland, Ohio



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

FLOOR PLANS OF THE MONTICELLO JUNIOR HIGH SCHOOL, CLEVELAND HEIGHTS, OHIO
John H. Graham and Company, Architects, Cleveland, Ohio

THE MONTICELLO JUNIOR HIGH SCHOOL AT CLEVELAND HEIGHTS, OHIO

An outstanding addition to the beautiful school buildings in Cleveland Heights, Ohio, is the new Monticello Junior High School, situated on Monticello Boulevard, at the corner of Yellowstone Road.

The school site occupies a plot of ground of seven acres, providing ample room for a regulation size football field beside the boys' and girls' playfield.

The athletic field is in the rear of the building, easily accessible to the boys' and girls' gymnasiums, with their shower and locker rooms. One of the gymnasiums is so planned that it may be entirely visible from the large auditorium by opening a soundproof folding partition, which runs across the entire width of the stage. Indoor sports, such as basketball, gymnastic drills, pageants, folk dances, etc., are thus given the stimulus of an audience.

The auditorium is treated in a pleasing Colonial manner, to harmonize with the exterior of the building. It provides seats for 860 people, and is located near the main entrance to facilitate its use as a community center when the school building proper is closed. A motion-picture booth, checkrooms, restroom and scenery-storage room are incorporated in the auditorium plan.

Directly above the auditorium is a large, well-lighted study hall, which is also used as a cafeteria during the lunch period. In the rear of this room is a modern, well-equipped kitchen. Toward the front, directly above the main entrance, the library is situated.

The building is planned to accommodate 1,000 pupils, with provisions for future extensions. It contains 21 classrooms, 3 artrooms, 6 rooms for general science, a sewing room, cooking rooms, 2 manual-training rooms and 2 music rooms, besides administration offices, clinic, restrooms, etc.

The construction is fireproof throughout, using fireproofed structural steel and reinforced concrete, with brick masonry walls. The floors in all classrooms are covered with linoleum. Corridors, kitchen, cafeteria, and cooking rooms have composition floors, while terrazzo floors are used in toilet rooms.

The exterior of the building has been treated by the architects with simplicity, frankness, and dignity. The central bay is featured by a graceful arched loggia at the main entrance, and a white Colonial tower at the roof. The two bays at either end are marked by a Palladian window motif at the gables. Although the size of the building is rather large, fronting 333 feet on Monticello Boulevard and 187 feet on Yellowstone Road, the red-brick walls contrasted by the stone trim and white window sash, and the unbroken slate roof, culminating in a graceful tower, impart to the exterior aspect a sense of domesticity, rather than monumentality. The school thus becomes an unobtrusive neighbor to the community of fine residences, which it serves.

The contract for the building was let November 6, 1929, and the classes occupied it in September, 1930. The cost was $550,000, or 35 cents per cubic foot. The sum of $50,000 was spent for equipment and furniture.

John H. Graham & Co., 1610 Euclid Avenue, were the architects who drew the plans of the building and supervised its construction. The plans are generally conceded to be remarkably successful, both from the viewpoint of pedagogic efficiency and economics in construction cost, and are being used as a model for other school districts for their projected buildings.

THE SYRACUSE BUILDING PROGRAM

The board of education of Syracuse, N. Y., has availed itself of the services tendered by the Syracuse University in securing a comprehensive building survey. Prof. Harry P. Smith, of that institution, has prepared a ten-year building program covering a period from 1930 to 1940, estimating that not less than $1,000,000 per year will have to be spent to keep pace with the growing school registration and to replace antiquated structures.

It is believed that the population of Syracuse, which is now approximately 200,000 will exceed 235,000 in 1940, and $266,000 in 1950. It is essentially an industrial city.

Supt. G. Carl Alverson, in discussing the program, says: "There is full recognition of the fact that school plants are not schools — that they are instruments which must be turned to good service in the making and carrying out of a satisfactory school program. School buildings must be safe; they must be sanitary, and serviceable. They must be built so that these qualities can be maintained and so that modifications which are to meet changing needs can be made easily.

"Through all this we must plan to finance the building program so that there will not be an excessive cost during any one of the next ten years, and so that we can justify the expense of this agent of education — the building program."

BALDWIN STREET COMMUNITY HOUSE, MONTCLAIR, NEW JERSEY
Holmes and von Schmid, Architects, Montclair, New Jersey

KINDERGARTEN, BALDWIN STREET COMMUNITY HOUSE, MONTCLAIR, NEW JERSEY
Holmes and von Schmid, Architects, Montclair, New Jersey

An Interesting Departure in School Buildings

Frank G. Pickell, Superintendent of Schools, Montclair, New Jersey

The Baldwin Street Community House, which was formally opened January 30, 1930, represents a departure from typical school construction. The accompanying cuts of the exterior and some of the special rooms will show to some degree the extent of that departure.

The building had its origin many years ago, through the interest taken by the club women of Montclair in social-service activities in the school district. Due to this interest, and the work done by a tireless, unselfish, social worker — a home visitor whose words of sympathy and whose genuine love for the people she served made her a powerful agent for American ideals — the board of education purchased a very fine old homestead and remodeled it for school purposes, with a part of it reserved for community-adult-social activities. When this old home became inadequate, and its upkeep too great, the new building arose in its place. The new building, while a community house for adult social activities, is strictly an annex to the Baldwin Street School to provide additional facilities.

The decision to have a building which was inviting and homelike in its atmosphere, has been fully justified by the adult use made of it. Moreover, it is an interesting expression of what may often be done, when conditions permit, to make educational buildings less formal and austere.

The building serves a section of the city in which an Italian population predominates. The type of architecture conforms to that of the former homeland of the people served, the exterior being authentic Tuscan. This exterior is designed after one of the better farmhouses or villas of seventeenth-century Tuscany.

The building is two stories high, with a roof of handmade red tile and walls covered with pinkish stucco. A second-floor balcony with wood lattice work, an outside front staircase, and polychrome trimmings and decorations all tend to enhance the Italian effect. The entrance with its bright terra-cotta trimmings and the terra-cotta panels on the outer walls, depicting cherubims in brilliant colorings, are happily reminiscent of Italy.

The building construction is of brick and hollow tile with stucco face. Heat is provided by an oil burner. A unit ventilation system furnishes fresh warm air. The stairs and corridors are fireproof. The remainder of the building is fire resistive in construction, with a steel reinforced-concrete slab on the first floor, and with steel sash throughout.

The structure, which is approximately 105 by 60 feet, contains a kindergarten, library, office for the community workers, community social room, sewing room, domestic-science room, teachers' dining room, teachers' sitting room, and adequate cloak, toilet, and storage rooms.

The kindergarten, which is 50 by 30 feet, has been designed in every particular for the welfare and happiness of its young patrons. A glazed terra-cotta Madonna and Child has been placed over the main kindergarten entrance. Metal cats have been used in lieu of kick plates. Door knobs have been placed at heights suitable to the five-year-olds. Everything in the kindergarten room has been built on a scale to fit the child. Large French doors of beautiful design open directly on a kindergarten playground, which is inclosed by a hedge and shaded by old trees wisely spared by older builders.

Silhouetted ducks, dogs, and rabbits peer down at the kindergartners from their observation posts on lighting fixtures. Peacocks in all their pride strut beside an open fireplace. The beamed ceiling, mural decorations, draperies, flowers, individual storage closets, and window seats, together with a variety of suitable kindergarten equipment, help to make this sunny room a place of unbounded happiness for little children.

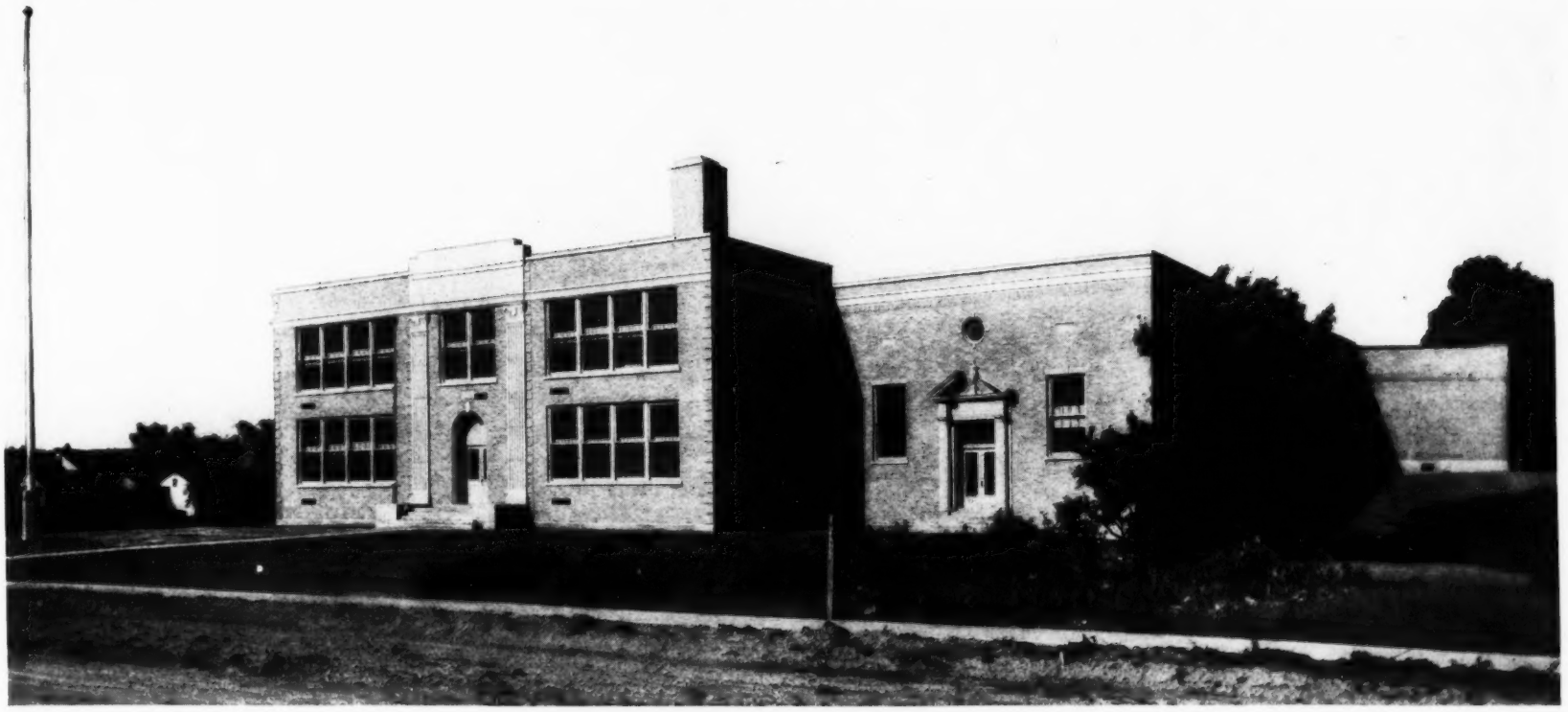
The library is operated under an agreement between the library board and the board of education as one of the public-school branches of the public library. The room is 37 by 26 feet. Heavy oak beams, supporting a ceiling stained an aged Chinese red, lend strength and color to this homelike room. A workshop for the librarian is provided in one corner. The equipment is standard and adapted to children of various ages. The room is attractive and inviting, and its appointments such as to make it a serviceable library. During the first six weeks 128 children joined this library branch. Circulation among the 506 children during the same period was 3,268. Practically $1,000 was spent for new books. Story hours are held weekly for boys and girls of the upper elementary-grade age. A picture-book hour is held each school day for kindergartners. Every afternoon the librarian reads aloud informally to small groups of children. The library in its new home gives every promise of rapidly becoming a real community center. At certain hours, the room is open for adult and general community use.

The rooms on the second floor are ample in size and each has been carefully planned for

(Continued on Page 133)

SCHOOL AND COMMUNITY LIBRARY, BALDWIN STREET COMMUNITY HOUSE, MONTCLAIR, NEW JERSEY
Holmes and von Schmid, Architects, Montclair, New Jersey

BALDWIN STREET COMMUNITY HOUSE, MONTCLAIR, NEW JERSEY
Holmes and von Schmid, Architects, Montclair, New Jersey



HIGH AND GRADE SCHOOL, BEMUS POINT, NEW YORK
Raymond A. Freeburg, Architect, Jamestown, New York

A NOTABLE COMBINATION SCHOOL

The idea is prevalent among school authorities and architects that the most difficult problems in schoolhouse planning and construction are to be found in the great buildings erected in the large cities. While it is true that high schools housing a thousand or more pupils are complicated in planning, engineering, and construction, the educational program and the funds available usually allow for considerable flexibility in the cost and arrangement, and consequently in the planning. In many respects, the combination school building in the small community where funds are rigidly limited, involves baffling problems of planning and financing. These schools are doubly a challenge to the best architectural service, because they must of necessity become the most important public buildings of the community and satisfy a changing educational situation for many years in the future.

A building which is a rather interesting solution of small community problems was completed in 1930 in the town of Bemus Point, New York. The building was planned by Mr. Raymond A Freeburg, architect, Jamestown, N. Y., and erected under his supervision.

The Bemus Point School

The new school at Bemus Point was planned to house two grade classes of an elementary school and to provide all of the high-school facilities for 125 high-school pupils. In addition, it was necessary to provide an auditorium with a seating capacity of 500, which would serve as a community gathering place and would be ample to carry on the physical education program required by law. Community conditions required that the building be erected to supplement an existing four-classroom building which, together with the two classrooms in the high school, afford ample space for 225 children.

The building is simply designed, with details in a dignified Georgian style. The exterior walls are of light tapestry brick backed with tile, and the ornament is limestone. The general dimensions are 120-ft. length on the main street front and 56-ft. depth. The floor construction is concrete and the inner walls are load-bearing tile.

The building has been planned with utmost attention to economy of space and multiple use of each of the departments.

The first floor contains two standard grade classrooms, a classroom for high-school pur-

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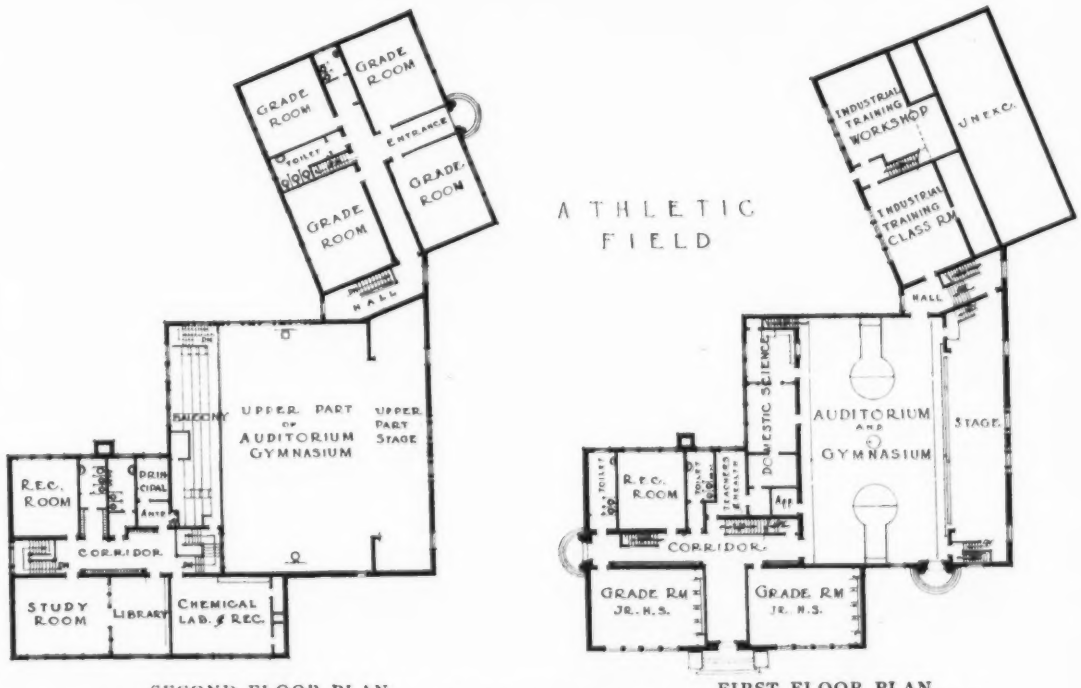
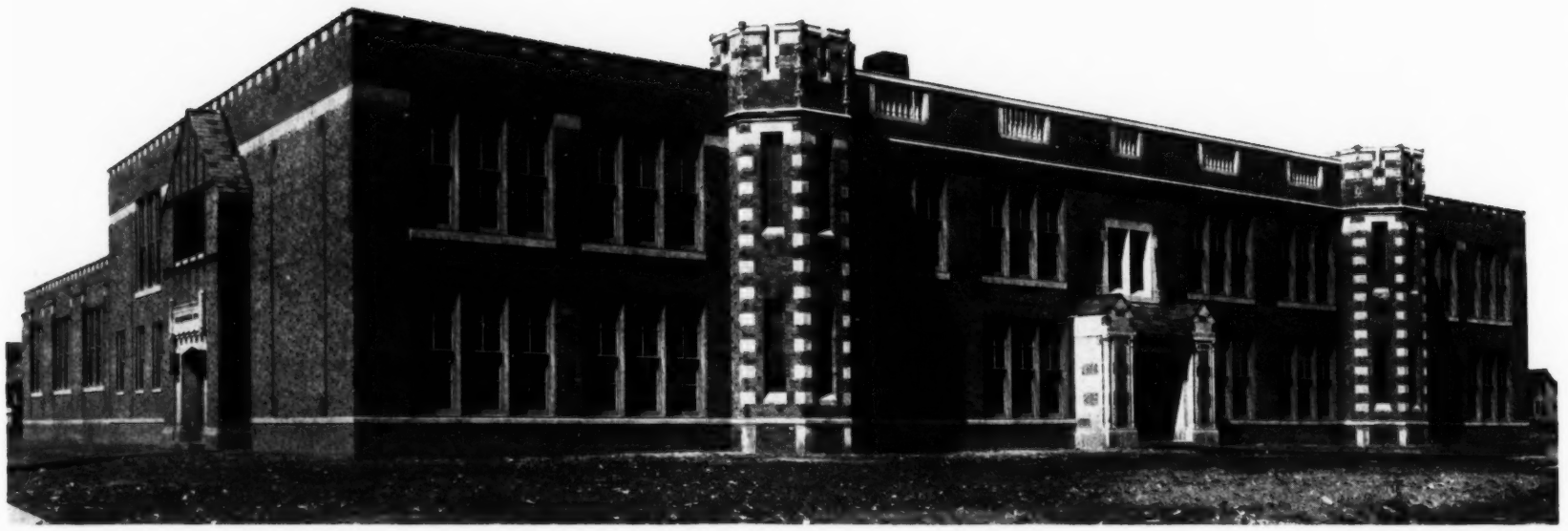
AUDITORIUM, HIGH AND GRADE SCHOOL, BEMUS POINT, NEW YORK



SECOND FLOOR PLAN FIRST FLOOR PLAN
FLOOR PLANS OF THE HIGH AND GRADE SCHOOL, BEMUS POINT, NEW YORK
Raymond A. Freeburg, Architect, Jamestown, New York



THE MACOMB ELEMENTARY SCHOOL, DETROIT, IS OF RECTANGULAR FORM, WITH THE GYMNASIUM SEEN AT THE LEFT, CONTAINED IN AN ELL. THE BUILDING'S CONSTRUCTION IS OF BRICK, CINDER BLOCK, AND SLAB CEILINGS.

How Detroit Plans and Erects School Buildings

Ernest O. Fox, Director, Dept. of Bldgs. and Grounds

In a city such as Detroit, where the growth in school population has been exceptionally rapid, considerable study and organization is necessary in order to carry through a building program commensurate with the needs of the school system.

For the past eight years the money appropriated for new schools in the city of Detroit has averaged $3,560,000 per year.

The procedure followed in formulating and carrying on a building program of this size can be stated but briefly here.

Each fall, a building budget is prepared by means of surveys conducted in various sections of the city where the need for additional facilities are apparent or seem probable. This detailed information is carefully studied and, where conditions warrant, sketches for a new building, unit, or addition are prepared by the Department of Building and Grounds of the board of education. In preparing sketches, the attitude of the designer is to plan "a school building to fit the curriculum." In other words, the curriculum is established by the educational authorities and the building is planned to accommodate, and permit as nearly as possible, 100-per-cent functioning of the established curriculum.

This budget, when prepared and the project costs estimated, is submitted to the board of education and the appropriating bodies of the city to be revised either upward or downward as their good judgment dictates. When the amount is finally established, finished sketches are prepared to be forwarded to such architectural and engineering firms as the board of education may designate. These sketches are accurately and carefully drawn, constant care being taken to eliminate all waste space, hazards, and conditions which might bring about expensive construction, at the same time including all items necessary for the successful educational operation of the building.

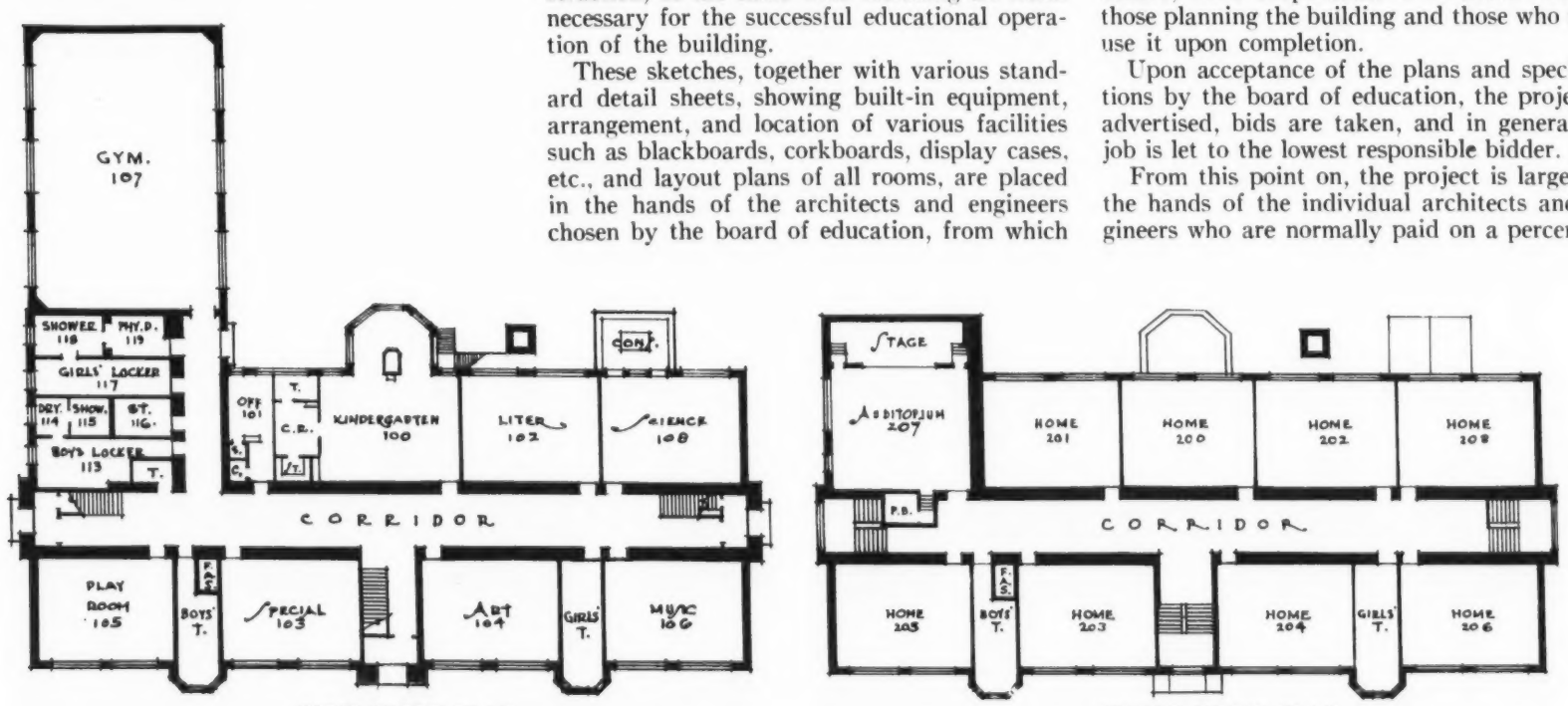
These sketches, together with various standard detail sheets, showing built-in equipment, arrangement, and location of various facilities such as blackboards, corkboards, display cases, etc., and layout plans of all rooms, are placed in the hands of the architects and engineers chosen by the board of education, from which they prepare working plans and specifications for the erection of the project.

While these plans are being prepared, constant contacts with the architects and engineers are maintained for the purpose of furnishing necessary educational information and to advise and consult with them, to the end that the finished building shall be educationally complete, mechanically satisfactory, and economically constructed.

Before bids are taken on a project, all working plans and specifications, both architectural and mechanical, are carefully checked by the department of building and grounds and the supervising engineer's department of the board of education. All educational supervisors and department heads, who will later be called upon to use portions of the new building, are given the opportunity to check the plans and offer suggestions and criticisms. Through this procedure, close coöperation is obtained between those planning the building and those who must use it upon completion.

Upon acceptance of the plans and specifications by the board of education, the project is advertised, bids are taken, and in general the job is let to the lowest responsible bidder.

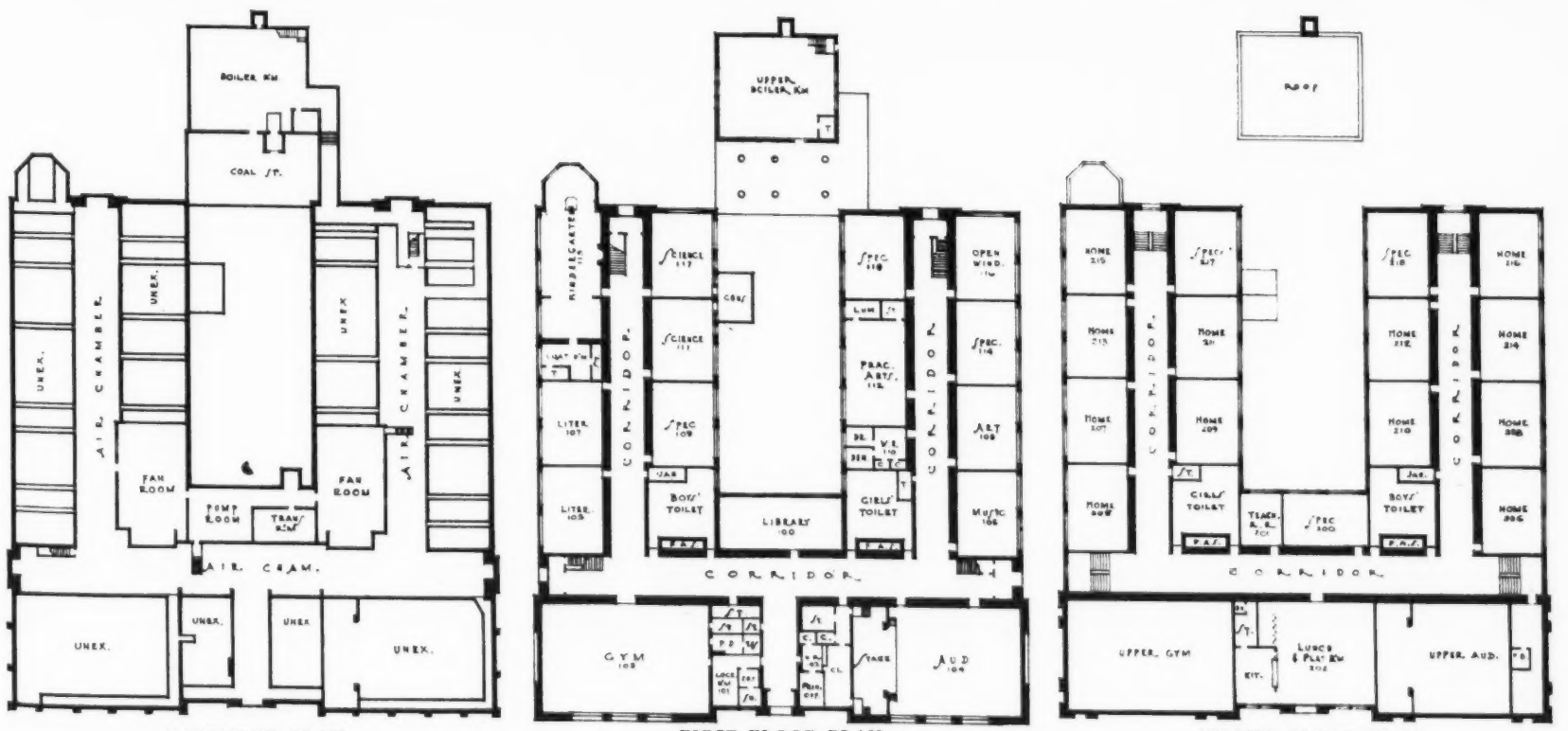
From this point on, the project is largely in the hands of the individual architects and engineers who are normally paid on a percentage



FIRST FLOOR PLAN SECOND FLOOR PLAN

FLOOR PLANS OF THE MACOMB ELEMENTARY SCHOOL, DETROIT, MICHIGAN

THE MARSHALL ELEMENTARY SCHOOL IS ONE OF THE LARGEST OF THE NEW TYPE OF CONSTRUCTION. IT IS OF STANDARD U SHAPE.



BASEMENT PLAN FIRST FLOOR PLAN SECOND FLOOR PLAN

MARSHALL ELEMENTARY SCHOOL, DETROIT, MICHIGAN

basis for their services in connection with plans, specifications, and supervision of the job.

Upon completion of the building, a general inspection is made by the inspector of new buildings for the board of education to assure satisfactory fulfillment of the various contracts.

Under the present policy, every building entails the letting of three contracts, one for the general construction which includes masonry, steel, lathing and plastering, roofing, carpentry, painting and allied trades; a second for the heating, ventilating and plumbing; and a third for all electrical work. Experience over a period of years has seemed to indicate that such a division of contractural relations is of advantage in securing a speedy and satisfactory erection of the building.

The capital investment is, of course, not completed with the school itself. Equipment must be bought and placed, and adequate improvements made on the surrounding grounds to fit them for school purposes.

The work of equipping a school is handled in Detroit by a separate department known as the equipment department. A chart of the progress of each building is kept, which aids this department in regulating purchases, delivery, and installation of equipment, so that the building may be occupied as quickly as possible after completion. In general, the equipment for all of the various activities has been standardized and is purchased under a definite specification from the lowest responsible bidder.

The final consideration in the whole project is the development of the grounds. There is a landscape division within the department of building and grounds, which functions in connection with these improvements to the school site.

Detailed landscape plans and specifications are prepared in the office and costs estimated at the time that the contract for the new building is let. This amount is set aside from the building budget and, upon completion of the building, a field crew proceeds to construct walks, drives, lawns, playgrounds, to plant shrubbery, and to erect fences as detailed by the plans and specifications previously prepared.

Although in the case of a building completed in December, this portion of the work may not be done until the following spring, because of weather conditions, it is essential that it be completed as early as possible in order to allow the complete functioning of the entire school plant.

The foregoing is of necessity fragmentary and greatly condensed but may be useful in some small measure to make clear to those interested, something of the procedure of the Detroit board of education in carrying forward the building programs for new schools.

Detroit Lowers its School Costs

Susa P. Moore

Detroit has long been known as a city that is open to new school-construction ideas which are of benefit to the pupils, and at the same time reduce building and maintenance charges. One of the first cities to introduce the platoon organization and one of the most consistent and successful users of it, Detroit has been watched with interest by educators.

In Detroit, much of the school builders' interest is concentrated on the economical construction of the elementary school. Since 1923, the cost of these schools in Detroit has been continually, though gradually, reduced. A typical group of Detroit elementary schools shows the following prices per pupil: 1923, Ferry School, $325; 1925, Washington, $297; 1925, Logan, $285; 1926, McKerrow, $290; 1927, Hally, $271. The constantly lowering cost was due to economies in planning and equipping, not due to scraping corners but to greater experience in planning, estimating, and building. Detroit follows the system of having the rough plans prepared in its own architectural and engineering offices, then giving the work to architects who prepare the designs on the basis of the plans given them. In this way, sizes of rooms, number of rooms, amount of lavatory and locker space are based on data collected over a number of years by men whose single interest is schools. It provides the architect with definite data and objectives toward which to plan the building. Following greater familiarity with Detroit needs, the local contractors and builders can make more accurate, and consequently lower, bids.

Within the past few years, however, another element has entered the Detroit field, which not only promises lowered costs, but actually attains them. A different type of construction which depends on poured-concrete ceilings and cinder-block walls has been largely instrumental in reducing costs to $225 per pupil in the Williams School (41 cents per cubic foot); $218 per pupil in the Macomb (39.9 cents); and $264 per pupil in the Marshall School (38.4 cents per cubic foot).

Two factors go to make up this economy in building. The ceilings used are of poured-concrete-slab construction and are 8 to 12 in. thinner than the ordinary floor and ceiling. This lessened thickness means lower outside walls and a saving of thousands of cubic feet without lessening the cubical contents of the room.

The second new factor in these buildings is the use of cinder blocks for the interior walls and as inside facing for the outer walls. The blocks are made of crushed cinder and cement, molded into hollow blocks, and are laid up as is brick. Their variation in color lends itself well to a random pattern. Very effective mottled patterns can be achieved by using a little care in selecting the various shades. Joints are either raked or flush. Cinder block may be used either for skeleton or structural work.

Laying of these blocks requires a certain amount of skill and practice which the workman is not inclined to give, unless carefully supervised, or unless he is experienced in the work. One of the more difficult details is to keep a finished effect on both sides of the wall. That is, as both sides of the partition will show, the workman must point the reverse as well as the obverse side as he works.

Use of cinder blocks in outside walls may be either as a facing, with an air space between it and the brick finish, or it may be bonded with the brick as desired. The former is the more customary usage.

Although cinder-block walls are customarily left unpainted, they may easily be tinted. In these rooms the heating ducts are exposed, covered with cement, and then tinted the same hue as the ceiling proper. They are so arranged that they give a decorative note to the rooms.

Criticism of the cinder-block walls has been slight. Some complaints were voiced about the first two buildings of this type to the effect that noise from one room could be heard in another. However, this trouble has not been found in later schools. The improvement is due either to better workmanship, or to a more open mind, regarding the walls on the part of the teachers. The acoustic qualities of the block walls are considered good.

In these buildings wood is laid over the cement floors in the classrooms, and in the halls ½-in. battleship linoleum is laid directly on the cement without a felt lining. The cement is, of course, troweled perfectly smooth before it is set.

Among the most interesting and recent of the cinder-block schools are the Williams, Macomb, and Marshall. The first two are built on the same plan, a rectangular type with a corridor running its length, and a smaller branch corridor leading to the gymnasium in an L. The Williams School was designed to fit a site occupied by an old, out-of-date school. This building has the complete facilities of a sixteen-section school, including a small auditorium and a full-sized gymnasium. The cinder-block walls and the concrete ceilings are attractively tinted, while the corridor walls have a wainscoting of salt-glazed tile.

A departure from the split system of heating used in the other Detroit schools is being tried out at the Marshall elementary school. There is a large plenum chamber in the basement under the corridor. All air is passed through a washer and is circulated by fans. Ample radiation in the basement warms the air to 135 deg. and the warm air is drawn up through inner-wall ducts to the rooms. In such an installation supplementary radiation is unnecessary to take care of heat losses; therefore there are no radiators in the rooms. The circulating air takes care of both heating and ventilation. A separate blower attachment takes the exhaust air outward by way of the outside walls; in this way the recirculation and warm exhausted air are economically used to blanket the rooms.

The Marshall School is of standard U type, with twelve homerooms. There are several special ones, including an open-window room.

In this school is a room used at noon as a lunchroom, and at other times of the day for play purposes. Necessarily the question of tables was a vexing one. For, in order to use the room for lunch purposes, sturdy tables were necessary, yet they should be of a type which can be easily stored during play hours. Different types of tables were designed and tested by the department of equipment of the Detroit schools. The final form consists of a 14-ft. table (2 ft. 4 in. wide) which fits into a depression in the wall. The table is attached to the wall by a hinge about 27 in. above the floor. The same distance from the wall end is a hinge, and in the middle of the remaining section there is another hinge. Supports with roller feet are attached at each hinge. By giving the end of the table a slight shove, it folds up into the case, the top of the outer section remaining exposed in the wall. As the table tops are covered with linoleum, the panels form a decorative note in the room when the tables are folded into the recesses. They are particularly successful, since one person can put the tables up or down, instead of the two necessary for the other tables designed by the department. Children bring their own lunches, or purchase food prepared at the school kitchen which is located in a corner of the room.

In the Marshall School, the administrative offices are grouped near the front entrance, with school kitchen which is located in a corner of the gymnasium and auditorium occupying the

(Concluded on Page 134)

THIS ROOM IN THE CHARLES H. OAKMAN SCHOOL FOR CRIPPLED CHILDREN SHOWS THE WALL CONSTRUCTION, USING THE CINDER BLOCKS

Detroit's Board of Education

Frank Cody, Superintendent of Schools, Detroit, Michigan

Detroit is fortunate in having a group of remarkable and public-spirited citizens as its board of education. Indeed, from the very beginning of free public schools in Detroit in 1842, the tradition has been that there is no higher form of public service than that of the board of education.

Particularly during this last decade of rapid growth was it well that Detroit had a strong and capable school board. Detroit's school membership more than doubled in the nine years from November, 1920, to November, 1929, when it increased from 122,690 to 249,031. Meeting the problems which are attendant upon so phenomenal a growth has demanded the best counsel available.

A Small Board

Until 1917, Detroit's board consisted of 21 inspectors, one elected from each ward. Beginning as far back as 1903, however, there was agitation for a change to a small board elected at large. The movement gained in strength until the people, in 1916, approved an act providing for such a small board. This new board differed from the old in several ways: (1) There were seven members instead of 21; (2) Members were elected at large instead of by wards; (3) Members were elected for a term of six years instead of four years; (4) Members were elected on a nonpartisan ballot.

The Present Board of Education

The seven members of the board in order of length of service are: Mrs. Laura F. Osborn, a member since the inception of the small board in 1917, and twice its president; Dr. Angus McLean, a member since 1923, and a distinguished surgeon who served as a colonel in the A.E.F. during the world war; Mr. Frank A. Gorman, a member since 1925, president in 1929–30, and in private life a partner in an insurance organization; Mr. John H. Webster, a member since 1925, president in 1928–29, and a druggist who is prominent in local and national organizations; Dr. Burt R. Shurly, a member since 1927, president for the current year, a well-known specialist in ear, nose, throat, and chest diseases, who served in the Spanish-American War and later as a colonel in the A.E.F. during the world war; Mr. A. Douglas Jamieson, a member since 1927, and in private life vice-president of the Union-Guardian Trust Company, in charge of personnel; Mr. Edward H. Williams, a member since 1929, and in private life an operator in the field of insurance and surety bonds.

Assignment of Functions

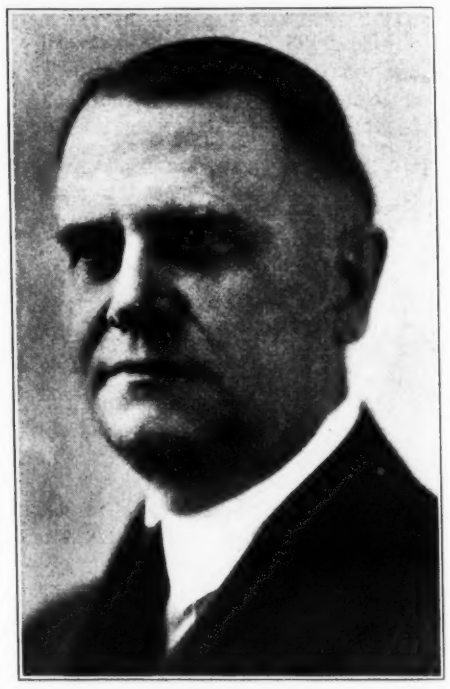
Detroit's small board adopted at the outset the plan of reserving to itself two major functions, that of policy formulation and that of appraisal. The third major function, that of education, it delegated to the superintendent as its chief executive. The following quotation from the by-laws of the Detroit Board of Education shows how completely the function of executive action is given to the superintendent.

The Superintendent of Schools shall be the Executive Officer of the Board of Education and under its direction he shall attend all meetings of the Board and be granted the privilege of taking part in its deliberations.

1. He shall establish and change the boundaries of school districts.

2. He alone shall be directly responsible to the Board of Education for the efficient operation of school functions for the Board of Education.

3. He shall have sole power to nominate and to assign, to transfer, promote, and demote or suspend all assistant superintendents, supervisors, principals, teachers, and other employees of the Board of Education as hereinafter provided. All



DR. FRANK CODY
Superintendent of Schools,
Detroit, Michigan

nominations, promotions, demotions, suspensions, assignments, and transfers of employees of the Board of Education which shall be made by the Superintendent shall be reported in writing to the Board at its next regular meeting and shall stand confirmed unless disapproved by the Board by a vote of not less than four members of the Board. He shall have immediate control of all assistant superintendents, supervisors, principals, and teachers. All directions and suggestions to them with reference to the performance of their respective duties shall come through him.

4. He shall prepare and submit to the Board for approval the several courses of study to be followed, and shall select and recommend to the Board for adoption all textbooks used in the schools. In the preparation of such courses and the selection of such textbooks he shall have the coöperation of other officers of instruction and of such special committees of teachers, principals, and supervisors as he may from time to time appoint for such specific purpose.

5. He shall, on or before the first meeting of January, submit to the Board of Education an estimate of expenditure for all purposes of the Board of Education for the ensuing year.

As a consequence of so clear-cut a distinction between the duties of the board of education and the duties of the superintendent, there has been possible a high order of accomplishment for the schools of Detroit. The board of education has devoted its time and energy to the study of conditions and the formulation of policies in accord with which the school system should be conducted. The actual operation of the schools is then left to the superintendent and his staff. However, through the powers of appointment of the superintendent and of review of his acts, the board retains final control of the situation.

The School Policy

The general educational policy adopted by the board of education and now in force provides for an ultimate organization of schools on the 6–3–3 plan. Provisions actually have been made for (1) platoon elementary schools with their socialized curriculum for the kindergarten and first six grades; (2) large intermediate grades 7, 8, and 9, with socialized and differentiated curriculum to meet the needs of adolescent children; (3) senior high schools, grades 10, 11, and 12, with socialized and differentiated curriculum.

The board of education has approved of the development of a collegiate organization which includes a liberal-arts college, a teachers college, a college of medicine and surgery, a college of pharmacy, and a college of law. Detroit is practically the only city in the country which has a system of municipal colleges as a part of its educational organization under one board of education and one superintendent of schools.

The policy of the board of education with relation to the housing program is as follows: (1) To provide every child with full-day session; (2) to remove all pupils from rented quarters which are unsuited to their needs; (3) to remove all pupils from damp, poorly lighted basement rooms; (4) to eliminate as early as possible the risk of fire danger in three-story elementary schools which were built fifty years ago of highly combustible materials; (5) to provide each pupil with full advantages of education in classrooms in which there are not over forty pupils; (6) to require no pupil to attend school in poorly built and equipped temporary buildings except as a temporary expedient; (7) to provide for growth in school membership in each budget.

Finally, perhaps the outstanding policy of the board of education, although never formally adopted as such, is the determination to base, as far as possible, its action on the facts in the case. Reorganization and readjustment of every type are preceded, wherever possible, by intensive survey and are effected always in relation to the general policy which has been adopted.

Administration of the Detroit Public Schools

Charles L. Spain, Ph. D., Deputy Superintendent of Schools

Beginning in 1916, when a new seven-member board elected at large came into power, the Detroit public schools have undergone important readjustments in organization, administration, and supervision.

All administrative power is centered in the superintendent of schools, who has complete control over all departments of the system, and subject to the approval of a majority of the board, initiates all appointments, transfers, and dismissals of teachers and other employees.

The Administrative Scheme

The schools are administered under a "line and staff" organization. The line officers include the superintendent, deputy superintendent, four assistant superintendents, and the principal. The staff officers are the technical experts in charge of service or subjects departments. There are in all eight directors ranking next to the assistant superintendents who are in charge of important units.

The organization is with certain limitations functional. The superintendent is the general director and correlating agent. The deputy superintendent performs duties of a like nature as delegated to him by the superintendent, acts for the superintendent in his absence, and in addition is in direct administrative control of the elementary schools, the department which formulates the building budget, and the department of building and grounds which prepares sketches for all building plans, and checks and approves all plans executed by architects employed by the Board. The deputy superintendent also works in direct contact with the super-

vising director of instruction and the supervising director of research and adjustment.

Of the assistant superintendents, the first is in general charge of intermediate and high schools with the coöperation of a supervising director of intermediate schools; the second is in charge of finance which includes the department of educational expenditures and the department of statistics and publications; the third is in charge of teacher personnel assisted by a director of assignment and transfer; and the fourth in charge of vocational schools.

The Directors

The supervising director of research and adjustment has under his jurisdiction all special-education departments, the psychological clinic, the placement division, the department of attendance and census, and the department of research which is directly under the control of an assistant director.

The director of the department of educational expenditures is concerned with requisitions, allotment of textbooks, the internal accounting system, selection, examination, and classification of personnel, the department of visual education, and the preparation of the maintenance and capital cost budget of the board of education, with the exception of that part pertaining to new buildings.

The department of statistics and publications secures and compiles statistical data, edits and publishes courses of study, reports, and printed forms, and maintains personnel records of all employees of the board of education.

The business manager who is also secretary of the board, controls all real estate, purchase and storage of supplies, operation and maintenance of buildings, and the accounting department.

Special Coördinating Groups

To promote coöperation and to coördinate the efforts of the several instructional and administrative groups, the following agencies have been constituted: An instructional council, which is subject to the approval of the superintendent, formulates general instructional policies and approves curriculums, materials and methods proposed by the supervisory group; an organization committee which formulates organization and administrative policies, subject to the superintendent's sanction; a supervisory council presided over by the director of supervision, and designed to coördinate the activities of the various instructional divisions; a district principal organization for the administration of the elementary schools. Each of the fifteen district principals is principal of a school and also has administrative and supervisory control over a number of other buildings in his district. District principals are responsible to the deputy superintendent and, with the assistance of subject supervisors, introduce new methods and materials of instruction into the schools in their several districts and supervise the work in classrooms.

The Schools

In accordance with a policy of the board of education adopted in 1919, the traditional elementary organization has been largely replaced by six-year elementary schools of the platoon or duplicate type; large intermediate or junior high schools with differentiated curriculum for pupils of grades seven, eight, and nine have been organized; and three-year high schools of the comprehensive type have been developed.

As a potential nucleus for a municipal university, the junior college was expanded into the College of the City of Detroit with power to grant bachelors', masters', and doctors' degrees.

Other organization changes in recent years have included the expansion of the program of the Cass Technical High School; the extension of the program of the High School of Commerce with the establishment of two branches; establishment of a Coöperative High School in which students spend part time in school and part in industry; the development of a Trade School for electricians, plasterers, bricklayers, and decorators with the coöperation of labor and employer groups; expansion of the Detroit Normal Training School into the Detroit Teachers College granting the degree of bachelor of science in education; and the assumption by the board of education of the control of the Detroit College of Medicine and Surgery, and the organization of Colleges of Pharmacy, Engineering, and Law.

The superintendent of schools correlates and unifies the activities of all the various administrative and instructional agencies by frequent meetings with his cabinet, the members of which, in turn, hold meetings with their several groups and thus disseminate throughout the school system important matters pertaining to policy and procedure.

How Detroit Manages the Business Problem of the Public Schools

Charles A. Gadd, Business Manager, Board of Education, Detroit, Mich.

The business manager, as secretary of the board of education, is responsible for the efficient administration of the construction, maintenance, and operation of buildings, purchase, storage and distribution of books and supplies, and the proper accounting for the same.

In this capacity, the business manager is responsible for the payment of and accounting for an expenditure of over thirty million dollars annually for the extension and conduct of the school plant. This plant includes 16 high schools, 18 intermediate schools, 206 elementary and special schools, 78 temporary schools, 2 colleges, 1 administration building, 1 shop, 2 warehouses, and 6 athletic fields, representing a total capital outlay of $97,427,000.

The School Construction Work

At the present time, there are 11 elementary schools and 23 additions, 1 intermediate school and 4 additions, 1 high school and 6 additions, and 2 special schools for which plans are being prepared, or are now in the process of construction, estimated to cost $9,400,000.

The landscape work for all these new projects was laid out and planned by the board's department of buildings and grounds. This department also checks the plans and specifications for new buildings and additions following their preparation by outside architects and engineers.

Employment Service

The employment of both men and women for nonteaching positions in all departments, was recently assigned to the department of personnel of the business manager's office. Approximately three thousand individual positions in this classified service are divided into two divisions, designated respectively as the competitive division and the labor division. These cover at the present time, 93 separate classifications in the clerical, janitorial, engineering, maintenance, and cafeteria service. Requisitions for new employees are made to the department of personnel by the heads of the various departments.

In the competitive division, the selection of new employees in each classification is made from an eligible list for that classification established by means of competitive examinations conducted by the department of personnel.

Appointments to positions in the labor division are made from applicants who, by evidence of previous service or skill, are best fitted for the positions to which they are to be assigned without formality of competitive examinations.

Building Maintenance

The labor divisions under the immediate supervision of the supervising engineer and the supervisor of property, now employ 335 skilled mechanics and assistants all the year around, to take care of necessary repairs and alterations to the school plant. The old Bishop School is now being used as a shop, warehouse, and headquarters for the mechanics. The warehouse carries a complete stock of tools and equipment, materials, parts, and supplies necessary for the various labor divisions.

Approximately 15,000 upkeep jobs are completed annually by these men, which include such work as redecorating of school buildings, interior and exterior, cleaning and refinishing school furniture, heating, ventilating, plumbing and electric wiring, roofing, sheet metal, and roof repairs.

The department is also equipped with a service plumbing wagon manned by plumbers and helpers, which carries parts and tools necessary for immediate repairs. During the year, the expenditures for this activity amounted to approximately $675,000, or an amount equal to 2.7 per cent of the total annual and recurring expenses.

Heating and Ventilation Service

The heating and cleaning of school buildings is also a function of the supervising engineer's office. This division now employs 1,415 men and women as engineers, janitors, cleaners, firemen, and elevator operators, representing a total annual outlay of $2,295,000.

Coal used in the schools is purchased on competitive bidding for a period of one year. Only the highest quality of coal is used, which is bought on contract direct from the mines, shipment being made to one unloading station, equipped with clam and other necessary loading equipment, including scales, for delivery to schools or storage yard. The coal required for this year will possibly exceed 2,100 cars, equal to about 105,000 tons and will cost approximately $500,000.

Buying Operations

The purchasing department makes all purchases for the system, including lunchrooms and bookstores. Purchases are made on a schedule which provides for the different months of the year at the time that the items for some one or more departments are purchased, or that contracts are placed for certain materials or commodities covering a period of six months or a year. The purchasing department issues 20,000 purchase orders annually, and fills 45,000 requisitions through the supply warehouse. The sales of books and supplies to students this year will possibly exceed $400,000.

Lunchroom supplies are purchased in large quantities and sold to the various school lunchrooms at cost. A large number of commodities are purchased for a year in advance, are stored in our supply warehouse, and delivered on requisitions to the lunchrooms as needed. The saving through quantity purchases has enabled the lunchroom department to serve a better lunch, and in many cases, at lower prices.

The Major Business Functions

The following outline shows the major functions under direction of the business manager:

Secretary's Office

1. Maintaining real estate and property records.
2. Caring for books, papers, and records of the board of education.

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The Detroit Convention

Norman R. Crozier, President, Department of Superintendence of the National Education Association

The President of the Department of Superintendence of the National Education Association extends greetings and best wishes for the New Year through the SCHOOL BOARD JOURNAL to the members and associate members of the Department and its fourteen allied organizations.

The program is prepared, the stage set for the sixty-first annual convention, to be held in Detroit, February 21–26, 1931.

The school staff of the city of Detroit, headed by Superintendent Frank Cody, and aided by the Chamber of Commerce and local clubs and organizations, has left nothing undone in arranging every detail for the comfort and convenience of the expected visitors and guests.

The reservations made in all the Detroit hotels indicate an unusually large attendance. The larger hotels are booked to capacity, not only for rooms, but for breakfasts, luncheons, and dinners for large groups. No town, city, or county can afford not to permit its school officials to attend this midwinter meeting, perhaps the largest and most important educational gathering of the nation.

The Department of Superintendence is a hard-working, serious organization, bent not on pleasure or entertainment, but vitally interested in the discussion and solution of the problems involved in the education of the children of America. The annual meeting assumes the aspect of a vast educational clearing house. The welfare of over thirty million public-school pupils is the prime consideration of this convention.

The general sessions of the Department will be held in the auditorium of the beautiful Masonic Temple. This building will also house the exhibits which greatly increase the value of the convention to all who attend. Every inch of available space has been engaged by exhibitors, and the fact that contracts for all booths were signed within twelve hours after they were offered by the business department is proof positive that the display of books, apparatus, equipment, and school material will be one that no progressive schoolman or woman can afford to miss.

NORMAN R. CROZIER
Superintendent of Schools,
Dallas, Texas

Among the high lights of the program that has been prepared with thought and care are Admiral Byrd, Tom Skeyhill, Rabbi Lefkowitz, Captain Richmond Pearson Hobson, Robert Zuppke, the National High School Chorus under the direction of Hollis Dann, and Henry Ford's orchestra.

More than half of the speakers will be new faces that have never been on an N.E.A. program.

Perhaps the presiding officer is divulging more than he should at this time, so he will close with the hope that this convention will be attended by the representative schoolmen and women from north, south, east and west, that the spirit will be truly national and not sectional, and that all will work together wholeheartedly and unselfishly for the good of the children of America.

The Department of Superintendence

Detroit, February 21-26, 1931

S. D. Shankland, Executive Secretary, National Education Association, Washington, D. C.

In 1916, when the winter meeting was last held in Detroit, Woodrow Wilson was president of the United States and M. P. Shawkey was president of the Department of Superintendence. Returning fifteen years later, a new Detroit will greet a new education. A decade of business expansion following the war — a period marked by refinement of methods of mass production — has made the Motor City marvelous beyond the dreams of 1916. Education, too, has had its triumphs, of which some of the signs are found in the huge increase of pupil enrollment, improved standards of building and equipment, vital contributions of educational research, and a more insistent demand that all the children of all the people shall share the benefits of the schools.

The general sessions and many of the auxiliary meetings of the sixty-first annual meeting of the Department are to be held in Detroit's beautiful Masonic Temple. Here, too, will be located convention headquarters, exhibits, and registration. Numerous meeting halls, an excellent dining room, and other facilities, make it possible for the principal convention activities to be well-cared for in the Masonic Temple.

The program offers several notable features. Admiral Richard E. Byrd will be the guest of the Department and will address the general session Monday evening. On this occasion, a tribute in the form of letters from American school children is to be presented to Admiral Byrd by President Norman R. Crozier of the Department of Superintendence. The National High-School Chorus, under the direction of Hollis Dann, will give a grand concert on Tuesday evening. "Here and Now in Education," a vital program of present-day schools and their activities, is to be presented by the Detroit Teachers' Association on Thursday afternoon.

The winter meeting of the Department of Superintendence brings together most of the leaders in American education. The superintendents of schools, who compose the Department's membership, are responsible for administering the education of over twenty million children. Knowing these facts, the meeting at Detroit presents to all who may participate in it an opportunity weighted with responsibility.

THE DETROIT CONVENTION

The sixty-first annual meeting of the Department of Superintendence will be held in the Masonic Temple at Detroit, February 21–26.

The railroads have allowed special round-trip tickets on the identification certificate plan, with one and one-half fare privileges to members of the association. Tickets will be on sale February 15 to 23 in the territory of the Central, Trunk Line, Southeastern, New England, and Southwestern Passenger Associations.

Convention headquarters, registrations, exhibits, and post office will be located in the ballrooms and drill hall of the Detroit Masonic Temple. (See page 154 for list of Exhibitors.) In addition to the usual type of exhibits, a special exhibit showing the activities of the Detroit schools has been arranged.

A number of departments and allied organizations have developed strong programs for the convention.

High Spots in the Program

Monday, February 23

First Contacts Between Home and School — Mildred Palmer, A. L. Holmes School, Detroit, Mich.

Byrd, the Explorer and the Man — Gilbert Grosvenor, president, National Geographic Society, Washington, D. C.

Conquering the Antarctic by Air — Rear-Admiral Richard E. Byrd.

Presentation of tributes from American School Children to Admiral Byrd.

Tuesday, February 24

Vitalizing Commencements — L. H. Petit, superintendent of schools, Chanute, Kans.

The Gifted Child — Worth McClure, superintendent of schools, Seattle, Wash.

The Dull Child — William E. Wenner, superintendent of schools, Ashtabula Harbor, Ohio.

Wednesday, February 25

How Can American Educational Forces Coöperate More Effectively? — Charles H. Judd, University of Chicago, Chicago, Ill.

Looking at the Whole Child — Hobart M. Corning, superintendent of schools, Colorado Springs, Colo.

Articulating the School as a Social Agency with the Life of the Community — Carroll R. Reed, superintendent of schools, Minneapolis, Minn.

Important Problems for Research in the Education of Teachers — John W. Withers, New York University, New York, N. Y.

Finance and Educational Articulation — John K. Norton, director of research, National Education Association.

Thursday, February 26

Knowledge of the Whole Being — William John Cooper, United States Commissioner of Education, Washington, D. C.

The Menace of Narcotics That Threatens the Youth of the World — Richard Pearson Hobson, Los Angeles, Calif.

Group Meetings

A number of topics and group leaders for group meetings has been arranged for the afternoons of Monday, Tuesday, and Wednesday.

On Monday, there will be ten groups, comprising state superintendents and commissioners of education, superintendents of cities, city assistant and district superintendents, county superintendents, and the National Council of Childhood Education.

On Tuesday, there will be ten groups, comprising counseling and guidance, school business administration, summer recreation and programs for children, professional organization and development of teachers in service, parent-teacher associations, school buildings and grounds, platoon schools, religious instruction, and teachers' salaries.

On Wednesday, there will be nine groups, comprising principles of articulation, adult education, product of the public schools, preservice teacher training, fiscal aspects of articulation, pupil-promotion problems, and problems of county superintendents.

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Equal Pay for Equal Work?

J. R. McGaughey, Professor of Education, New York

In recent years a number of state legislatures have passed laws making equal pay for men and women teachers mandatory. In states without equal-pay laws many boards of education have adopted the policy of paying men and women equally. The National Education Association directly or indirectly has sponsored this movement. There is no doubt that there is a strong tendency toward making equal pay the universal practice in American school systems. This article is written to support the thesis that this policy is unsound economically and professionally, and that it is founded upon sentimental rather than scientific bases.

In earlier days in this country, men teachers were almost universally paid higher salaries than women teachers in corresponding positions. As public education became general and teachers began to acquire a group consciousness, public-school teachers began to form themselves into organizations and associations. The majority of the members of these associations were women teachers. Quite naturally they began to question the fairness of receiving salaries lower than those paid to men. It is not surprising that many local, state, and national organizations of teachers passed resolutions calling for equal pay for men and women teachers. As a result of this propaganda and of the pressure brought upon boards of education and state legislatures, many board regulations and state laws have been adopted making equal pay mandatory.

Women Render Equal Service

The arguments advanced in favor of this policy seemed unanswerable. No one cared to deny that women teachers worked just as hard as men teachers, that they were just as devoted and self-sacrificing in their profession or that they rendered just as important and valuable a service to their communities and to the nation. On the average they had almost as much academic and professional training, and had just as many years of teaching experience as had the men teachers.

But all has not gone well in practice. In a short time superintendents of schools began to report that they were unable to secure men teachers at the salaries which they were able to pay the whole body of teachers. It was further claimed that the men teachers, whom they were able to secure, were of inferior personality as compared with the women teachers willing to accept the same salaries. In a great city such as New York as much as 80 per cent of the men, who applied for examination in order to qualify for teaching in the public high schools, were themselves foreign born or were sons of foreign-born parents. Even in a cosmopolitan city such as New York this seemed to be entirely too large a percentage for a teaching body to whom was to be intrusted an important share in the inculcation of American ideals and culture.

In an attempt to circumvent the natural operation of equal-pay legislation many subterfuges have been adopted and are in general use in practically every school system. Men teachers are given special titles or slight additional duties for which generous bonuses are added to their regular salaries. Higher salary schedules are adopted for manual-training teachers than for teachers of home economics. Men teachers are promoted to positions as heads of departments and principals, quite irrespective of the relative merit of available women candidates for these positions. Boards of education and superintendents of schools are quite justly accused of favoritism and of partiality because of their futile attempts to bring in and retain in their school systems strong men teachers. It is little wonder that careful students of school administration and specialists in the field of teachers' salaries and salary schedules have begun to entertain grave doubts as to the essential soundness of the equal-pay policy.

Family-Wage Plan

One of the proposed plans to improve the practical operation of equal pay is worthy of special mention. Quite commonly it is called the "family-wage" plan. It is rather a frank attempt to side-step the inherent weaknesses of equal pay without violating the letter of the law. In this plan it is proposed that there be no sex distinctions in salary, but that higher wages shall be paid to teachers, men or women, who have the greater number of economic dependents. Under this plan a woman with three bona-fide dependents would receive just as much salary for teaching high-school algebra as would a man with a wife and two children. Since men teachers have more dependents, on the average, than do women teachers, men teachers would receive a higher average salary under this plan, but they would not receive a higher salary just *because* they were men. Boards of education in at least two important American cities have considered this plan most seriously in the past three years. At any time we may expect a report that the family-wage plan has been adopted by one or more boards of education which have become distressed with the practical workings of equal-pay legislation .

This family-wage plan is unsound and undesirable for at least two important reasons. In the first place, it is not a proper function or responsibility of a board of education to provide financial rewards to men teachers who marry and acquire economic dependents. A board of education has one responsibility in this connection: It is that of securing the greatest possible instructional and educational service with the public money entrusted to them for expenditure.

It may be a good social and economic policy for the state to establish mothers' pensions or some other system of bonuses which would encourage responsible parents to raise large families, but this certainly is not a responsibility which should be delegated to a board of education. In the second place, the family-wage plan would certainly defeat the very end it is expected to serve. Why should a board of education pay an additional $1,000 a year, let us say, to a man with a wife and four children, when it can secure an equally good teacher who has no dependents? Just as surely as the sun rises, the man teacher with dependents will find himself unable to secure a desirable new position, or a promotion within the same school system to a higher-salaried position for which he is well qualified. This latter fact should be sufficient to end any serious consideration of the family-wage plan as a solution to the muddled situation in which boards of education find themselves.

The Economic Basis of Salaries

In the beginning of this article the statement was made that the tentative solution of the equal-pay problem was based on sentimental rather than scientific considerations. Let us now examine the facts and try to reach a sound solution of the problem. It was admitted that men are not better teachers, they do not work any harder, that they do not render a more important service than do women teachers. But the fact remains that no thinking person can deny that workers are not paid on the basis of the amount of service which they render, nor on the basis of the number of hours which they put in, nor on the basis of the difficulty of the labor which they perform. Our whole economic system is organized and must be operated on an entirely different basis. We do not pay for things on the basis of their intrinsic value, but largely on the basis of supply and demand. If we did not, diamonds would be cheaper than potatoes.

If there are ten thousand men who are well qualified to lay up the bricks in the wall of a building and only one man who is as well qualified to plan and design the building, we must pay a great deal more to secure the services of the architect than the bricklayer. If there are ten thousand fine young women well qualified to sell goods over the counter in a department store to every ten fine young women well qualified to perform the duties of private secretaries, we must pay much more to secretaries than to saleswomen. If there are tons of oranges available in the market and only a few dozens of alligator pears, we are able to buy oranges very much cheaper than pears. There is nothing mysterious or hard to understand, involved in the workings of the natural law, which makes unsound equal pay for men and women teachers. It is a simple case of the application of the economic law of supply and demand.

As long as our professional and industrial organization remains as it now is, there is bound to be a greater demand for the services of able young men than for the services of equally able young women. For the state to pass a law that men and women must be paid equally is almost as absurd as it would have been for the State of Indiana to have enacted into law a bill that was introduced a few years ago to change the value of the ratio between the circumference and diameter of a circle to 3.0 instead of 3.1416+.

Under equal pay, one or both of two unfortunate situations must exist: Inferior men will be drawn into our junior- and senior-high-school teaching positions and the cause of good education will suffer, as it is now suffering in many communities for this very reason; or women teachers will be overpaid in the economic sense. No board of education has the moral right to pay women teachers higher salaries than the economic demand for their services justifies. To do so is just as pernicious as to waste public money upon some other project for which there is no such well-organized, sentimental propaganda.

Fallacy of New York Plan

An excellent illustration of this wasting of public money is found in New York City. The economic demand for the services of able men in New York forced the board of education to place the maximum salary for men high-school teachers at about $4,500 per year. Because of the equal-pay law passed by the legislature of the State of New York a number of years ago the board of education must pay the women high-school teachers of the city the same salary. Not one woman in hundreds can command so high a salary in the competing professions and business positions in New York City. A great number of women high-school teachers in New York City are undoubtedly overpaid, in the economic sense, at least $1,000 a year. But this is not the whole story of the waste of money in New York City because of equal-pay legislation. A maximum salary of $3,000 a year for women elementary teachers in New York City is certainly as high as can be justified economically. When the board of education was forced to raise the salaries of high-school teachers, it automatically made it necessary to pay elementary teachers a maximum salary of about $3,400 a year in order to prevent unjustifiable discrimination between women teachers in high-school and elementary-school positions. It is un-

(Continued on Page 124)

Equipping the School for Radio Reception

E. D. Jarvis

Certain general considerations should be met in selecting a radio set for the school. A set which may be suitable for home use may not be at all suitable for a school. In the home, we are dealing with a small audience in a small room, bent mainly on listening for pleasure. The set may be of limited power, for programs are obtained in but one room; there is no need of extensive wiring in distributing programs throughout the building, although more homes are considering this feature now. Radio in the school is based on more ambitious lines. The audience will be of varying size, and the programs will have to be accessible to many rooms, so that they will fit into the curriculum without seriously interfering with the school routine. In some homes a certain amount of experimentation may be accepted by those of a scientific or mechanical turn of mind. In the school, however, the radio must be considered strictly in terms of the end itself — the program of instruction, with no attention to the means employed.

Essentials of School Sets

The first consideration in choosing a set will be its compactness and simplicity. The most suitable equipment will be in a cabinet — in one compact unit with no delicate parts exposed. The cabinet in which the equipment is obtained should be sturdy, with a durable finish, and should have a pleasing appearance. A lock to insure protection from theft of parts or tampering by amateur experimenters is a necessity.

Absolute reliability and simplicity of operation are essential. Most new sets are built to operate on the simplest plan possible, having single dial control and other features easy for the inexperienced, unscientific layman to understand. The present radio is ready to operate after installation, upon the snap of an electric switch. Beyond the need for replacement of tubes at very infrequent intervals, the set will not need servicing for a considerable period of time, if the proper care is taken of it. Reliability cannot always be determined in the trial of the set, but must be judged from past performances for other people, the reliability and reputation of the manufacturers, and the grade of materials used in construction. Inferior and cheap parts may produce excellent results at first, but will soon give trouble.

Selectivity, sensitivity, and controlled power are necessary to reliable school reception. Since recent reallocations, the best set is able to select almost any station program without the squealing interference of another station. For school use this is a positive necessity, for, with the added volume often required for the reception of a broadcast in the schoolroom, station interference can completely destroy the value of a program. The set must be equally reliable and selective for the high dial ranges, the nearest stations, and the lowest frequencies. The set must be powerful enough to portray accurately the most delicate audio vibrations as well as the loudest and strongest sounds. The natural volume which the set is capable of producing must be great. There should be no need for taxing the set to its volume limit to reach the most remote corners of the rooms to be served. Where maximum volume is steadily required, distortion may result, and even at its best, reception will not be entirely natural and pleasing. Power should be supplied regularly, and fading should not occur.

High-Grade Sets Pay

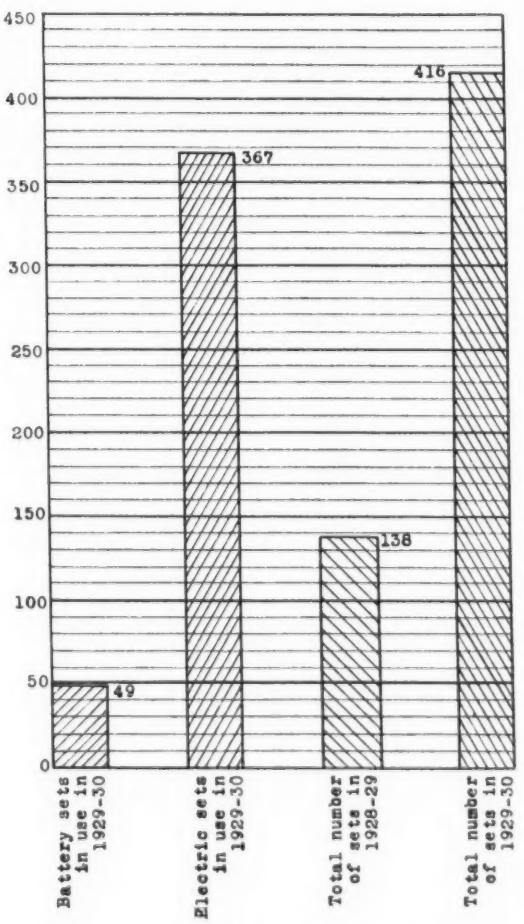
The tone quality of the set ought to be full, rounded, convincing, and lifelike. No school has a place for a set which will not register low tones, both musical and spoken, and higher vibrations, with absolute accuracy. Musical instruments, singing, and ordinary speaking voices should sound entirely natural. Each instrument of the orchestra ought to be quickly discernible, and every musical note of the piano should come from the loud-speaker, full-toned, vibrant, and clear.

No school should have to pay the list price for a radio set. Most dealers will grant discounts, widely ranging from the ordinarily quoted prices, to schools. However, a seemingly high price cannot be permitted to determine the failure to purchase the set. A compromise between low cost and maximum efficiency must be reached. What may seem to be a bargain may soon prove to have been a highly undesirable purchase. In making a selection, the equipment must be considered permanent and its maintenance over a period of years must be taken into account. Wherever it is possible, the purchase of equipment should be made through, or directly from, a local dealer. He will then be responsible for perfect installation and reception. Necessary and skilled adjustments may be made, and should any flaw in parts or workmanship of installation appear, the school may have the proper adjustment made quickly.

The equipment in use in Ohio has cost from $25 to $1,000, or even more, for some large systems with central control devices. In estimating costs, each school must solve its own problems. Every type of equipment from that of a grade building with two or three rooms, on up to a large high school must be "tailor-made." It may be desirable, for rough preliminary estimates, however, to know the price ranges for different pieces of apparatus which may be required.

1. Receiving set.....$60 to $150 and up
2. Loud-speakers .....$10 to $25
3. Switchboards .....$15 to $75
4. Power amplifiers.....$75 to $175
5. Phonographic pick-up.....$15 to $25
6. Microphone .....$25 to $75[1]

Wiring and installation may vary.



SCHOOL RADIO SETS IN USE IN THE STATE OF OHIO

(As obtained from the annual report of the Ohio School of the Air for 1929 and 1930.)

Three Types of Sets

Price trends for this type of material seem to be downward. Receiving sets of improved design and equipped with other devices for school use are being perfected and sold at lower prices than ever before. With discounts varying so widely and equipment prices changing so rapidly, any estimates are of little value.

The type of equipment chosen will depend upon many things. The first fact to be considered is the building for which the equipment is desired: whether it is a one-room building, a two-room building, a consolidated school, a high school, or a large graded school. The number of pupils, size of the rooms, the layout of the buildings, and acoustic conditions, are other considerations. Much will depend upon the system of radio instruction to be used and upon the supervision contemplated by the executive educator. The installation selected must fulfill all the needs of the particular school situation and provide satisfactory radio reception at any point where it is desired. There are probably three main types of equipment from which selections are made. The first is the simplest, least costly, and most flexible. It consists of the individual classroom radio. The second is the installation of a receiving set at some central point, usually the principal's office, and the extension of speaker outlets to various classrooms. The third is the public-address system, plus one radio receiver or more.

1. Small Grade-School Equipment

The one-room elementary school requiring radio will do well to select a table model of some reliable make. This offers every advantage at minimum cost and lowest upkeep. The table model will be readily portable. If alternating current is not available, the selection will be somewhat more difficult.

Battery sets, at present, are seldom well constructed for classroom use. There is a great need for a sturdy, up-to-date battery set suitable for school use. Several newly perfected devices and parts, such as the pentode tube, new electrolytic cells, etc., bid fair to bring the battery-operated set to a par with the all-electric receiver. A battery set may be considered to be more readily portable than the all-electric set, since there is no need for a socket outlet for electricity with which to operate it. All that is required is to run a short wire to the nearest water pipe; a short wire (20 to 60 ft.) around the picture molding or baseboard, will serve well enough for an aerial. Loop antenna may prove desirable because of added portability. Before purchasing a battery set, however, the set should be thoroughly tested under all conditions, for volume and selectivity, with special reference to the programs which the school will use most.

An extension cord, to which the loud-speakers may be attached and moved about over the room, ought to be provided. Under some circumstances it may be advisable to place the speaker in the midst of the class. Again, where one grade may be using the radio while all other seven are supposed to be concentrating upon their lessons, it will be highly desirable to place the loud-speaker very near to the listeners and to tone down the volume of the program.

All loud-speakers used with extensions ought to be of the magnetic type. The dynamic speaker can be used where electricity is available, but their performance is not noticeably superior. Any speaker, no matter how expensive,

[1]Koon, C. M., Suitable Radio Equipment for Schools, N. P. (1929), Ohio State Department of Education.

must be adjusted properly if the reception is desirable.

All-Electric Sets

Where lighting current is available, the advantages of socket power means endless and constant power at the snap of a switch. There are no batteries to run down or become short-circuited, only to be discovered at the most unfortunate time. Socket power means the lowest cost of operation, since batteries have always been the largest source of expense in battery-operated receivers. The all-electric set has greater power and more natural tone qualities due to more proper audio-amplification and power tubes of greater capacity. The volume is always ample for a classroom and may be used to operate a second speaker or more in the classroom or elsewhere, should occasion demand it.

The set ought to be placed in the front of the room and, for a one-room school, near the teacher's desk. With the loud-speaker extension, programs may be received anywhere in the room.

In the two- or three-room elementary school the problem of equipment is not much different from that of the one-room school. It may be that a single set with extensions will serve the purpose. In this solution, the receiving set ought to be placed in the hall, so that a teacher will not have to enter another's room to tune in the set. Perhaps one extension cord, long enough to reach anywhere in the building from the place where the set is kept, will fulfill the requirements. Or, the extensions may be installed semi-permanently by running them from the receiver along the woodwork to a fixed point in the rooms. Here, fixtures may be arranged to plug the loud-speaker in, or to connect another shorter extension cord on, so the speaker may be movable. This provision should be made if the placing of the radio is fairly well established.

Another solution would be to have one very readily portable set which might be easily carried from one room to another. Loop antennae would be desirable and if the set is a battery set, all that will be needed is a ground connection. This, too, should have an arrangement for transferring the loud-speaker about over the room. Radio sets do not always stand up well under continual moving such as is frequently encountered by school property, so that, while portable sets are sometimes desirable, actually this may prove to be an expensive method of equipping the school.

A third method of equipping this type of school is to supply each room with a small portable table model. This will be a little more expensive, but will give absolute satisfaction.

2. Small High Schools and Consolidated Schools

In a small high school or consolidated school with six to twelve rooms to be equipped, there are several possible choices of equipment. Most of the installations being used now do not have more than this number of rooms equipped.

One solution is to have only a single portable set. This is most unsatisfactory, for, in receiving a regular schedule, the moving of the set continually will become a burden, and the set — no matter how compact or sturdy it may be — will soon get out of order.

Two or more portable sets may be provided. These will have to be transported continually about and, while not so difficult as the first method mentioned, this arrangement will soon prove tiresome. The cost is high for a building no larger than this.

A third solution and the one most practicable appears to be a receiving set located in some central spot — perhaps the principal's office — with extensions for the rooms requiring programs. (Some schools use old interroom telephone wires.) These extensions should be fixed, with plugs for attaching speakers directly, or short extension cords to which speakers may be attached. There will be some rooms which it may not be desirable to outfit with extensions because of their infrequent use for radio programs. In order to make it possible for them to receive programs on these few occasions, a long extension cord, wound on a spool, may be obtained. This long cord may be attached directly to the receiver, or may be coupled to one of the fixed extensions.

For this type of school it is extremely doubtful whether more than three or four loud-speakers wil! ever be in use at the same time. The power of an ordinary electric receiver suitable for school use is sufficient to operate this number without added amplification.

3. Desirable Additional Units

Should the use of the radio increase and the school find itself desiring more complete and stronger equipment, the needed apparatus may be supplied in the needed units. There are several companies that specialize in building up equipment to meet larger needs. A microphone may be desired, and then perhaps a magnetic pick-up for a phonograph, or perhaps more loud-speakers must be added, which will, in turn, call for more power and an amplifier to be added. To operate all this equipment, which will be mounted on a panel, a switchboard will be necessary. Each unit may be added and fitted to the panel. This panel may then be fastened to the wall.

The microphone may be had in a variety of forms and sizes. The administrator must choose the type he can use with the utmost satisfaction. He may want a small hand microphone to place on his desk and into which he may speak while sitting in his desk chair. He may prefer to do his broadcasting while standing, and will choose a full-sized stand. Various designs, shapes, and heights are available. A very sensitive microphone may be desirable if the administrator has large rooms to reach, a large number of speakers to operate, or if there is likely to be disturbances of an auditory type at the receiving end while he is talking to the rooms. On the other hand, he may desire one not so delicate in picking up sound waves, if sounds, such as typewriting, the whirring of electric fans, adding machines, etc., are occurring. However, extra money spent for a valuable microphone is not usually regretted. It may be desirable to have more than one microphone and connections in various places, such as auditoriums, gymnasiums, and elsewhere, where they may be connected into the circuit. It may even be practical to purchase a portable microphone which may be carried about.

Sound-Amplification Problems

The phonographic or magnetic pick-up should be capable of handling full orchestra and band selections without chatter or distortion. The electric motor or other motor operating the turntable should be quiet and create no interference.

Any new speakers added should match, in type and impedance, the others in use.

The question of amplification is a complex one and little can be said of it which is not entirely technical. The amount and type of amplification can only be determined by the radio technician who will take into consideration the equipment in use, rooms to be served, and acoustic properties of the building. Most engineers are of the opinion, however, that the average good, radio receiver will operate ten to fifteen loud-speakers of the magnetic type, each of which requires from .2- to .25-watt input for full volume. The dynamic speaker requires more — from one to three watts for satisfactory operation. Amplification is the most costly addition of all. Some engineers suggest the installation of another receiving set rather than extended and increased amplification, explaining that the cost is very little different, since good sets are obtainable now at much reduced prices, while amplifiers remain high. They also suggest the possibility, in the smaller schools, of wiring the rooms so that either set may be used, thereby doubling the selection of programs and stations.

With this added equipment, a switchboard must be provided. Many new types are being marketed now. At the 1930 meeting of the Department of Superintendence, several new types of switchboards were being displayed, for which no prices were quoted. These switchboards permit the administrator to tune all rooms in at once to listen to a radio program, his announcements, or other microphone activity; to have communication with one or any number of combination of rooms desired. They vary in size, shape, and design, but are so arranged that they may be easily connected to any equipment already in use.

Auditorium Sets

Even though regular reception will not be needed in the auditorium, it is desirable to have it equipped for reception. It furnishes one of the most difficult problems of all to be encountered. It should be remembered that auditoriums were formerly constructed with no thought whatever of radio installation. The problem to be solved is one of making undistorted, clear-cut programs available in every corner of the room. A radio loud-speaker is an electric power device, much the same as an electric motor. The loud-speaker converts electrical energy into mechanical work, which is, in this case, the vibrating of more or less air space. Obviously, the school auditorium, being of a size many times greater than a classroom, contains much more air space to be put in vibration. A far more powerful loud-speaker is required, activated by a powerful amplifier. Some auditoriums are being equipped with loud-speakers consisting of two or three dynamic loud-speaker units concealed by silken or other drapes on suitable baffle structures and placed, either at the side of the proscenium opening, or at the back of the stage. Other positions may prove more desirable for the speakers, depending on the acoustic properties of the auditorium. It would seem undesirable to place two or more speakers in an auditorium in an effort to properly distribute sound. This might serve for music, but in speech the result will be a perfect conflict of wave trains and a pandemonium of confusion.

In all these installations, it must be again emphasized, the equipment must be "custom-made." Units must be fabricated into a compact device meeting all the requirements of the particular school. What may prove excellent equipment for one school may be outstandingly poor placed elsewhere.

4. Equipment for Larger Systems

In the larger high schools with twenty to thirty or more rooms to be served by radio, the best solution is the "master set."

This is a powerful, single-dial radio set with amplifiers, dependent in number and type upon the number of speakers required, and an electric orthophonic phonograph with pick-up. It includes also a standard microphone, a control and distributing panel, all in a compact console cabinet. The cost of this equipment will probably be about $600 plus $25 for each speaker, and plus wiring costs.

For school systems with two or three separate buildings located very near or adjoining to each other, it will be practicable to use one set and extend lines to each from which loud-speakers may be installed and used as in the other building. However, if the buildings are not near to one another, separate radio equipment should be installed in each.

5. Fitting up the New Building

In the new building an ideal situation may and should be provided. A master set should be planned for, with loud-speakers in each room. With proper acoustic considerations, the speaker may be fixed permanently in the wall for most classrooms. There still seems to be a doubt

(Concluded on Page 126)

Compensation for Janitorial-Engineering Service

H. S. Ganders, University of Cincinnati, Cincinnati, O., and C. E. Reeves, Elmira College, Elmira, N. Y.

In 1922 Garber[1] made comparison of the average annual salaries paid janitors with that paid elementary teachers in 50 representative cities. In every case except one the average salary of janitors was greater than that of teachers. He shows that in 1919, janitors received on the average $355 more salary than elementary- and high-school teachers, whose salary at that time was on the average, $625 per year. It is true that most teachers were employed for the school year only, while three fourths of the janitors were employed on the 12-months' basis, but on the other hand, janitors often received living quarters in addition to their salaries, and in 65 per cent of the cities they received extra compensation for extra service.

In 1924–25 the average compensation of 59 janitors and engineers in the schools of Montclair and Hackensack, New Jersey, and Stamford, Connecticut, was $1,372 per year. This was an increase from an average salary of $1,215 in these cities for the school year 1919–20. In 1924–25 the average salary for janitors in 217 cities and towns in Massachusetts, according to the Massachusetts study, to which reference has previously been made, was $1,277.

Paid More Than Teachers

In 1926 Vander Meer[2] attempted to arrive at the actual compensation (total value received) of 168 janitors in schools of the Rocky Mountain Region. He assigned the following values to considerations other than regular salary, where such compensations were received.

	Per Year
Living quarters	$120
Heat	60
Light and power	30
Water	15

The results were as follows:

67 janitors in schools having one or two janitors; average salary, $1,157; average total remuneration, $1,183; average added increment, $26.

38 janitors in schools having from three to five janitors, average salary, $1,182; average total remuneration, $1,200; average added increment, $18.

63 janitors in schools having six or more janitors, average salary, $1,306; average total remuneration, $1,342; average added increment, $36.

168 janitors in all schools, average salary, $1,219; average total remuneration, $1,247; average added increment, $28.

From these data it would appear that janitors in buildings having six or more janitors receive more compensation in the way of living quarters, heat, light and power, and water, than janitors in buildings employing fewer janitors.

In 1927 the Research Division of the National Education Association[3] showed salaries for janitors throughout the United States to be as follows:

1. Salaries of 1,692 school janitors in 557 cities of from 2,500 to 5,000 population ranged from less than $600 to over $2,600, the median being $1,202.
2. Salaries of 2,035 school janitors in 374 cities of from 5,000 to 10,000 population ranged from less than $600 to over $2,800, the median being $1,228.
3. Salaries of 3,225 school janitors in 298 cities of from 10,000 to 30,000 population ranged from less than $600 to over $2,600, the median being $1,309.
4. Salaries of 4,542 school janitors in 147 cities of from 30,000 to 100,000 population ranged from less than $600 to over $2,800, the median being $1,452.
5. Salaries of 6,529 school janitors in 59 cities of over 100,000 population ranged from less than $600 to over $3,800, the median being $1,390.

The median salary paid 37 rural-school janitors in Cuyahoga county, Ohio, in 1926, according to Harshfield, was $135 per month for 12 months, or an annual salary of $1,620. In one-janitor buildings the median salary was $1,500, the range being from $235 to $3,450 per year. In about half of the total number of schools additional help was employed to assist the janitors. Helpers were paid from $5 to $10 per month less than head janitors. "Sweepers" were paid from $15 to $110, with a median of $50 per month, while schools were in session. In addition to the above, extra help was employed to assist in vacation cleaning.

The cost of janitorial-engineering service, both per square foot of floor area and per pupil enrolled, varies widely in different buildings even in the same school system. It should vary widely, for these are but two of a number of factors to be considered in determining such cost. However, there is much evidence that the variation is not the result of the consideration of the other factors involved in the difficulty of caring for school buildings.

Cost Variations Large

In Cuyahoga county, Ohio, it was found that the variation in "cost of janitorial service per square foot" ranged from 9.1 to 53.2 cents, with a median of 16.2 cents per square foot, per year. The "cost per pupil enrolled," ranged from $3.07 to $25.71, with a median of $8.95 per year.

Salaries vary widely in different places and according to different standards maintained in building care and operation. Engelhardt, Reeves, and Womrath[4] set up the following standard for salaries of janitors, engineers, and assistants for any particular building.

"It is impossible to set a standard salary for head janitor-engineers and assistants since costs of equal service will vary in different places. But taking into account the fact that in everything except academic education the janitor-engineer must be the equal in practically all respects of the teacher, the fact that there is a differential between remuneration for men and women, and the fact that the janitor-engineer must be paid an amount sufficient for the rearing of a family, the following may be used as standard:

"The average salary of all janitor-engineers of a building (head janitor-engineers and assistants) should equal or exceed the average salary for all elementary teachers (exclusive of the principal) in the same building.

Pay for Overtime. The adjustment of pay for "overtime service" is a very difficult problem. In most schools the janitor's hours are already long. To ask him to open and close the building at night and to render the custodial service so often necessary in connection with night meetings would be unjustified on any count except for the fact that in many situations he is the only individual who can render the service. In rural and village schools these extra sessions range from none to twenty meetings per month. It is well that the facilities of the school be extended in this way, but provision must be made for compensation of janitors for the extra work entailed. Janitors should receive extra compensation for services at evening meetings held under the auspices of the school as well as for those held by outside organizations. Janitors should be compensated for all service that is actually extra to that necessary for the conduct of the school.

Pensions for Janitors

Pensions. It is highly probable that a survey of the United States would show that relatively few school districts provide pensions for school janitor-engineers. Only 14 of 274 school districts in Massachusetts, according to a recent study of janitorial service in that state, provide pensions for school janitor-engineers under the terms of the following law:

> The school committee, official, board or other body having control of janitors employed in public schools of cities and towns which accept this section as provided in the following section, or have accepted corresponding provisions of earlier laws, may retire, with an annual pension, any janitor so employed who has reached the age of 60, after completing a service of not less than 25 years, and is physically incapacitated. The pension shall be one half the compensation to which the pensioner would have been entitled for full employment during the last year of his service, but not more than five hundred dollars a year, and shall be payable out of the appropriation for the support of public schools, maintenance of school buildings, or payment of janitors. Chap. 32, Sec. 44, General Laws of Massachusetts.

The New Jersey teachers' retirement plan (Chap. 80, Laws of 1919, as amended to 1922) applies to janitorial-engineering employees as well as to teachers. It provides for retirement at the age of 62 or after 35 or more years of service. It provides for disability retirement and also for withdrawal benefits and for several optional benefits in case of death. Funds are derived from the contributions of members and contributions from the school apportionment fund of the state. The contributions of members are deducted from salaries paid by the boards of education. For a complete statement of the yearly allowances made to members upon retirement, the reader is referred to the New Jersey teachers' pension and annuity-fund law.

Problem of Absentees

Pay During Absence on Account of Illness. Many school systems pay janitor-engineers in part or in full during a limited period of illness, but the practice is far from universal. It would seem that such policy would be as fair to janitor-engineers as to teachers. It has been found that the teachers of a school system who take undue advantage of sick leave are a surprisingly constant group. It is not at all improbable that the same situation obtains among janitor-engineers. Instead of penalizing the large majority of honest janitor-engineers by withholding pay while ill, it would seem that a much wiser practice would be the elimination from the janitorial force of all unreliable and dishonest workmen. There is no more reason for retaining untrustworthy janitors than teachers of a similar stamp. Pay during a reasonable period of absence on account of illness is rapidly becoming the accepted practice.

Income Other Than Compensation. In more than 100 school systems the writers found that 37 per cent of the janitors thought it necessary to find ways of obtaining additional income over and above the income accruing directly from salary, quarters, heat, light, and all other compensation received from the boards of education. Janitors, included in the 37 per cent earning money outside of their main occupation, reported their leading sources of extra income to be as follows: rental of property (41 per cent), manual labor (32 per cent), small farming or gardening (5 per cent), clerical work (3½ per cent), miscellaneous, including work with Boy Scouts, teaching music, managing a hotel, carrying mail, serving as janitor for churches, doing laundry work, etc., (18½ per cent). Amounts received from these sources varied from $9 to $840 per janitor, for the year 1924–25. The median amount was $260. It would appear that about one half of the janitors who have incomes other than compensation from the school board earn such incomes by labor of one kind or another. These incomes were all earned by full-time janitors. Considering the long hours janitor-engineers spend in school buildings, the practice of earning "on the

(Continued on Page 108)

[1]Garber, J. A., *The School Janitor.*

[2]Vander Meer, Cornell, *The Status of the School Janitor of the Rocky Mountain Region*, p. 146. Unpublished thesis at Colorado State Teachers College.

[3]National Education Association, *Salaries of City School Systems, 1926–7, Research Bulletin*, Vol. 5. No. 2. March, 1927.

[4]Engelhardt, N. L., Reeves, C. E., and Womrath, G. F., *Standards for Public School Janitorial-Engineering Service*, p. 12. Bureau of Publications, Teachers College, Columbia University, New York.

THE AMERICAN
School Board Journal

EDITORS:

WM. GEO. BRUCE WM. C. BRUCE

Board-of-Education Discipline and Backbone

WITH the progress made in the matter of school discipline the application of corporal punishment has been largely discarded. There are school authorities, however, who hold that corporal punishment ought not to be definitely abolished. The very fact that the rule exists, although it may be applied in extreme instances only, has a wholesome effect upon pupil conduct.

Some of the most embarrassing situations in school life arise when parents charge teachers with an unwarranted infliction of punishment. Such cases become doubly embarrassing where they find their way into the law courts and the details become public knowledge. Sometimes the teacher has gone too far. More frequently both pupils and parents are in the wrong.

An interesting case came to light recently in Dayton, Ohio. Paul Cromer, a school principal, found it necessary to chastise a boy. The attitude of the parents was so threatening that the principal resigned his position. The board of education, in judging the true merits of the case, refused to accept the resignation. It dealt with the matter in the light of the disciplinary stability of a whole school system.

The *Dayton Journal* in commenting on the situation said: "Students, particularly those in the upper grades, who refuse to obey the rules, who will not bow to school discipline and who strike the teacher when the latter attempts to enforce discipline, must be dealt with summarily and effectively. It should not be necessary for either the teacher or the principal to be annoyed by unruly or obstreperous boys of that type. A better plan, it would seem, would be to immediately expel the offender from the school, turn him over to the proper civil authorities, and allow the law to take its course."

There is a way, as suggested in the editorial, of dealing with the incorrigible and unruly, and simplifying matters as far as the school authorities are concerned, but a red-blooded schoolmaster does not hesitate much in approaching the disciplinary side of his job with some degree of energy and thoroughness.

The Dayton editor adds: "The principals and teachers in the school have too great a responsibility to the children and the parents of the city as a whole, to allow any considerable portion of their time and effort to be wasted on students who are unwilling to accept proper discipline or on parents who are disposed to uphold children in their defiant attitude. The board of education has done well to emphasize and to place the stamp of its approval on school discipline. It should now go a step farther in the interest of parents and children generally, by taking whatever action may be necessary to promptly relieve teachers of students who are confirmed trouble-makers and who are unwilling to accept school discipline."

The solution to the problem must be found by reaching the parent. The schools have the right to resort to expulsion. The courts have the power to compel pupil attendance, and to deal with derelict parents. A rule permitting corporal punishment in extreme cases, although seldom enforced, has not lost its beneficent influences.

Why School-Building Programs are Progressing

A GROWING school population constantly demands new schoolhousing. The building records for the past few years have demonstrated that the school authorities have met the problem with reasonable expedition and thoroughness. While the shortage of school seatings, which existed mainly in the larger centers of population, was not wholly overcome, it nevertheless remains that a great improvement has been effected.

There has been a commendable acceptance of the program idea in schoolhouse planning. Many of these programs are based upon exhaustive surveys made by specialists. Thus an intelligent approach to the building of new structures and a renovation of the old has been made.

The present economic slump, and the consequent prevalence of unemployment, has entered the deliberations of boards of education. While there is, on one hand, the cry for retrenchment of school costs, there is, on the other, a tendency to face the situation in a practical and sane fashion.

That situation, reduced to common factors, spells the needs of popular education. This means that the schools must go in times of depression as well as in times of prosperity. Economic slumps come and go, but the training for citizenship must continue.

With a display of enterprise and energy that is characteristic of the American spirit in the school, authorities have in the main concluded to go ahead, build needed schoolhouses, and thus serve two definite purposes; one is to afford needed schoolhousing, and the other is to relieve the unemployment situation.

The financial considerations involved in building projects bear a favorable outlook. Bond issues may be engaged with the promise of a low rate of interest. Building materials may be obtained at a reduced cost. Labor, too, has experienced some reductions. The volume of school-bond issues voted during the year 1930 have been exceedingly large and gives promise that the school-building operations for 1931 will be correspondingly favorable.

On the whole it must be said that the school authorities throughout the country are approaching the building program with a spirit of optimism and with commendable enterprise and foresight.

Three Approaches to the Married-Woman-Teacher Problem

MUCH has been said in the past on the question of whether the married-woman teacher who has an able-minded and able-bodied husband to support her, should remain in the employ of the schools. Sentiment on the subject has varied considerably. There is the practical side, the theoretical, and there are the economic, educational, and social phases.

With the prevailing depression, and the consequent unemployment, the subject is brought to the fore with greater emphasis than ever before. Many boards of education throughout the country, without much deliberation or debate, have peremptorily dropped the married-women teachers from the payroll, and with apparent public approval.

Where the question has been advanced to the several stages of debate, it has been interesting to note how the several approaches to the subject have entered as arguments for and against the married woman teacher. These several viewpoints, stripped of all minor and irrelevant considerations, exceptional circumstances and the like, may readily be classified into the educational, economic, and social.

In approaching the subject from the purely educational viewpoint it is claimed that the social side of things ought not to enter. It is here held that character and efficiency of the applicant as a teacher alone should determine the choice between a married and unmarried woman. The champions of this contention hold that the married woman can, as a rule, bring more sympathy, understanding, and experience into her teaching service than can the single woman.

Those who approach the question from the economic viewpoint hold that the single woman, who is dependent upon her calling for a livelihood, should have the preference over the married woman who is supposed to be supported by her husband. It is further contended that it is unfair to allow man and wife to earn two salaries while the single woman upon solely educational grounds do not admit that the social profession, is left without employment.

Thus the educational and economic side of the question are briefly outlined. But there is also a social side. Those who defend the married woman upon solely educational grounds do not admit that the social side can consistently receive consideration. Those who approach the subject from the economic viewpoint believe the social considerations to be entirely inconsequential or of secondary importance only.

The social considerations, however, are deemed by others quite per-

tinent to the question. The family constitutes the most important unit in the social order. The married-woman teacher owes something to her husband and her children. If she is both a wife and a mother, it is questioned whether she can do full justice to a classroom of children.

It may be contended here that if she serves efficiently as a teacher it is no one's business but her own if she fails in her function as wife and mother. The question, however, may be raised with equal legitimacy that the example thus set cannot be tolerated in a well-ordered social program. It is here argued that society as a whole has a rightful interest in the several family units in order that recognized traditions and virtues may remain a fixed part of the social structure.

The crucial question here is whether the married-woman teacher, as such, can so adjust her duties and obligations as to do justice to both her family and her schoolwork. On this point, it may be said, that inquiry has never gone very far because it involves somewhat the inquisitorial and the more sacred relations of family life.

There is this to be said that in considering the married-woman-teacher question, from all angles, the social factors deserve greater attention than has thus far been given them. We are not entirely agreed that those who champion the cause of the married-woman teacher from the purely educational viewpoint are entirely right. Nor can it be said that those who deal with the matter from the economic side of things only are entirely wrong in favoring the single woman.

The mental, moral, and physical welfare of the school child is the chief objective toward which all school-administrative labors must be directed. The encouragement of social standards which tend to undermine the mission of motherhood and wifehood and the fulfillment of an ideal home life, are not in harmony with the ultimate and finer aims of popular education.

Are Schoolhouse Dedications Desirable?

DURING the past year the columns of this publication, in brief news items, reported many schoolhouse dedications held throughout the country. In many instances, a festive program was engaged in, distinguished educators were called upon to grace the occasion by their presence and their voice, and music, and song flowed freely, attended by enthusiasm and a fine civic spirit.

At the same time, many new school buildings were opened during the past year without any ceremonials. The architect simply turned the building over to the school authorities, the latter turned the keys over to a custodian, and the school was declared open. The general public was not invited to inspect the new structure, or in any way reminded of the fact that the opening of a new institution of learning was in itself a memorable one.

One cannot, however, read the press accounts of schoolhouse dedications without becoming convinced with the fact that the educational value of such events cannot be ignored. They arouse public interest, lend a new prestige to the schoolhouse, and give renewed zest and enthusiasm to the cause of popular education. The citizen sees what his money has achieved and is less likely to balk on the payment of school taxes.

After all, the opening of a modern school structure is an event in the life of the community. The structure, as such, not only embodies the best in architectural achievement, but also symbolizes the cultural aspirations of the citizenship. The activities which attend the school-bond campaign, and which are in many instances ingeniously and energetically staged, might well be followed by a festive schoolhouse dedication. The public is usually appreciative of a courtesy, and is best impressed with an invitation to visit the new schoolhouse and secure a visual demonstration of what has been accomplished.

The dedication programs are always interesting and instructive, and in most instances elevating and inspiring as well. The public has a chance to see the board of education, the superintendent, and principal in action, and learn something of the motives and ambitions of those in charge of the school system. It notes the progress made in school architecture and the aims and objectives of modern education.

It would seem, therefore, that the school authorities, who have given much thought, time and effort to raise a splendid school edifice, would also emphasize the completion of the project by an appropriate dedication program, and invite the public to share in a festivity that is intensely American in manner and purpose.

Who Runs the Schools—Board of Education or Superintendent?

WHO owns the public schools? The people. Who runs them? The board of education and the superintendent."

This paragraph appears in an editorial published in the *Philadelphia Record* as an introductory to a discussion on a controversy that has arisen between superintendent and board of education. The former recommended professional workers for promotion. Members of the board "felt that they were asked to be rubber stamps okaying selections dictated by the superintendent."

The same question recently arose at Indianapolis. Paul C. Stetson, the new superintendent, selected his assistants. Under the interpretation of a former board of education this procedure would have not been countenanced. The new board held that the chief executive must be permitted to choose his lieutenants, if he is to be held responsible for ultimate results. His appointments were ratified without question.

Members of the Philadelphia board of education proposed that the superintendent suggest three names for each position and leave the board to make the final choice. Superintendent Broome, according to report, resisted the proposal on the ground that this would open the way for "the people who pull door bells to get appointments," and thus would bring in politics.

The question here reduced to simple terms hinges upon the fixing of authority. Shall the superintendent nominate, and the board ratify; or, shall the superintendent submit several names for each position and let the board determine the final choice. The exercise of the latter prerogative on the part of the board members would intimate that the superintendent's judgment to choose the right person might be questioned, or, at least, that the judgment of the board member in the solution of a professional service was preferable.

The proposal is unquestionably an invasion of the prerogatives of the superintendent who must have the initiative in all matters of a professional nature. Such a delegation of power by no means reduces the board to the nature of a rubber stamp. The board in any event holds the veto power, and controls the situation when it exerts its authority in exacting results. Finally, it retains the supreme authority to dismiss the superintendent if he does not measure up to the duties and responsibilities assigned to him.

The board of education, is primarily a policy-making body. It delegates authority to those specially trained to perform executive service in the professional side of the school system. It is legislative in scope and function.

Tenure of Board-of-Education Presidents

HOW long shall the president of a board of education be kept in office? This question is raised occasionally where the term of the incumbent of the office has expired and the selection of a new president is in order. When at Altoona, Pa., recently, Joseph C. McKerihan was elected president of the board of education, he announced that he would hold the office for one term only and would positively decline reëlection. He believed that the honor should be shared by other members of the board.

There is no position in the public life of any community that is more honorable and important than that of a board-of-education presidency. The position involves a sacred trust and one which is vital to the American conception of government and the perpetuity of its institutions. The position involves the elements of leadership, a broad grasp of the cause of popular education, a vision as to local possibilities, and a measure of executive ability.

That being true, it remains whether every member of a board of education feels himself or herself, capable of filling the office. There are those who by virtue of local prestige, temperamental qualities, and experience in life, are better suited for leadership than others. There are also those who recognized their own limitations and who would not care to aspire to leadership.

It would be unwise to hold that the rule of presidential rotation should apply to every board of education. The majority sentiment always controls, and every board of education must determine for itself who among its members enjoys the confidence of the body as a whole, and is best fitted to be placed at the helm.

Bond Prices Approaching Satisfactory Level[1]

Harold F. Clark, Ph. D., New York

Bond prices are again approaching a very satisfactory level from the standpoint of the school district selling bonds. Barring some totally unforeseen elements, bond prices should get even better before 1931 has run its course. However, the past sixty days has provided one of the most unusual records in years of sensational changes in bond prices in a short period. Bond prices, after having approached panic low levels, have recovered substantially the lost ground.

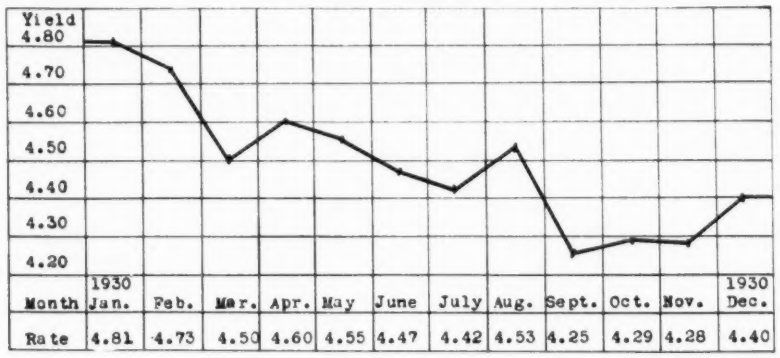


TABLE I. AVERAGE PRICE OF ALL SCHOOL BONDS SOLD DURING THE MONTH

In the summer of 1930 it seemed as though bond prices were headed toward exceedingly attractive selling levels. By October, confidence was being badly shaken in the entire financial structure. Bond prices began to yield ground slowly, then more rapidly, and by the middle of December we had a situation which was characterized by some leading authorities as panic prices. We quote from one of New York's authorities to show the sensational change that has occurred since then. "The municipal bonds have not only recovered from the panic levels of mid-December, but have reached last year's highs." This was written in the early part of the second week in January with every prospect of later improvement.

TABLE II. Amount and Yield of Bond Issues

1. School bonds during the month[1] of December..8	35.680
2. All municipal securities sold during the year (to date)	1.485.000.000
3. All school bonds outstanding (estimated)	3.261.000.000
4. Average yield of all school bonds outstanding (estimated)	4.63%
5. Yield of school bonds of ten large cities	4.23%
6. Yield of United States long-term bonds (Quotation the middle of January)	3.17%

[1]The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

There are certain fundamental factors in the situation that seems almost certain to lead to more satisfactory selling prices for bonds. Chief among these factors at the present time, is cheap money. Toward the end of December, the Federal Reserve Bank of New York reduced its rediscount rate from 2½ per cent to 2 per cent. This established a new low record for the Federal Reserve system during its entire history. When one stops to think that the rate has been reduced from 6 per cent to 2 per cent in a little over a year the change is impressive. This rate of 2 per cent is, perhaps, the lowest rate that has been quoted by any central bank since the cheap-money period around the beginning of the century. With the rediscount rate there is every reason to think that bond prices will be established upon a thoroughly satisfactory level.

By using sufficient care in issuing bonds, most school districts can obtain satisfactory prices at the present time. One can say with as much certainty as is possible to say anything regarding the present financial situation, that there is every prospect of even better bond prices later in 1931. It seems as though nothing short of a fundamental and long continued breakdown of our economic and industrial system, or of a major international upset, could bring about a different situation. Although on grounds of public policy there are good reasons for going ahead with public building wherever it is feasible, school districts can wait with reasonable certainty as far as the issuing of the bonds is concerned. Although we expect the schools to do their part in advancing public construction to relieve the present unemployment situation, we do not think there need be undue haste in the issuing of bonds.

TABLE III. Bond Sales and Rates[1]

Year	School	Municipal	All Public and Private	Year	Municipal
1929	230*	1.432*	10.194*	1929	4.67*
1928	218	1.414	8.050	1928	4.45
1927	266	1.509	7.776	1927	4.49
1926	260	1.365	6.344	1926	4.61
1925	323	1.399	6.223	1925	4.58
1924	288	1.398	5.593	1924	4.26
1923	206	1.063	4.303	1923	4.76
1922	237	1.101	4.313	1922	4.81
1921	215	1.208	3.576	1921	5.18
1920	130	683	3.634	1920	5.12
1919	103	691	3.588	1919	5.04
1918	41	296	14.368	1918	4.90
1917	60	451	9.984	1917	4.58
1916	70	457	5.032	1916	4.18
1915	81	498	5.275	1915	4.58
1914	42	320	2.400	1914	4.38

[1]By special permission based upon sales reported by the Commercial and Financial Chronicle.
*Not final.

[1]Copyright by Harold F. Clark.

TABLE IV. Average Yield of Long-Term Federal Government Bonds[1]

Month	Rate	Year	Rate %
1931		1928	3.437
Jan.	3.30*	1927	3.464
1930		1926	3.544
Dec.	3.31*	1925	3.797
Nov.	3.32	1924	4.010
Oct.	3.34	1923	4.298
Sept.	3.37	1922	4.301
Aug.	3.38		
July	3.37		
June	3.37		
May	3.41		
April	3.46		
March	3.40		
Feb.	3.50		

[1]Taken from Federal Reserve Bulletin.
*Not final.

Although nothing is more certain in the present financial situation than that there may be sudden changes shifting prospects for every type of security, the present situation is perhaps the most hopeful one in years for a really satisfactory bond market. The speculative situation that so badly upset the bond market in 1928–29 has passed. The year 1930 was spent largely in paying the price for the excesses of the years before. That price has not been fully paid, but the worst of it probably has been. For those school boards contemplating the issuing of bonds in 1931, our advice would be to watch conditions very carefully, but that insofar as can be seen at present, the prospects seem exceedingly hopeful for really good bond prices.

December showed very few school-bond issues sold for less than 4 per cent. A surprising number were sold for more than 5 per cent. Our index of bond prices during the month of December means perhaps as little as it has in any one month, due to the fact that bond prices made such a sensational drop during the month and partially recovered. The average for the entire month represents

TABLE V. Security Prices and Yields[1]

Date	Average Price of 404 Stocks (1926 Average = 100)	Average Price of 60 Bonds	Average Yield of 60 High-Grade Bonds
1931			
Jan.	107.8*	98.1*	4.53*
1930			
Dec.	109.4*	97.8*	4.55*
Nov.	116.7	99.1	4.46
Oct.	127.6	100.0	4.41
Sept.	148.8	100.0	4.41
Aug.	147.6	99.6	4.43
July	149.3	98.7	4.49
June	152.8	98.2	4.53
May	170.5	97.9	4.54
April	181.0	97.9	4.54
March	172.4	97.8	4.55
Feb.	166.5	96.4	4.65

[1]As reported by Standard Statistics Company, Inc. Used by special permission.
*Not final.

a decided increase over the month before. The average rate at which all school bonds in the United States were sold during the month of December was 4.40 per cent. This represents an increase of .12 of 1 per cent, over the average price in November.

The total of school-bond sales during the last month of the year was in the neighborhood of $35,000,000. Just as the fairly large amount in November was largely due to one important issue in Chicago, so this excessively large amount in December was due to the overwhelming size of one New York City issue. The total bonds sold other than the New York issue was very small.

The total of all municipal bonds sold during the year 1930, was larger than the amount in 1929 or 1928, but not quite so large as 1927. Last month it was estimated that the total bond sales for 1930 would not fall much short of $1,500,000,000. This estimate will be reached, or at least very closely approximated as a total of $1,485,000,000, has already been reported.

TABLE VI. Revised Index Number of Wholesale Price
(United States Bureau of Labor Statistics. 1926 = 100)

Month	All commodities	Building Materials	Year	All commodities	Building Material
1931			1928	97.7	93.7
Jan.	80.1*	84.7*	1927	95.4	93.3
1930			1926	100.0	100.0
Dec.	80.3*	84.9*	1925	103.5	101.7
Nov.	80.4	85.6	1924	98.1	102.3
Oct.	82.6	85.8	1923	100.6	108.7
Sept.	84.2	86.4			
Aug.	84.0	87.4			
July	84.0	88.9			
June	86.8	90.0			
May	89.1	92.9			
April	90.7	94.7			
March	90.8	95.4			
Feb.	92.1	95.7			

*Not final.

Table IV shows that the yield of long-term Federal Government bonds has been far more stable than the yield of other bonds. The tendency still seems to be down on our highest grade public securities.

Table V shows in graphic measure the drastic decline that has occurred in stock-market prices. From a high level of 181 in April to an estimated level well below 110 by the end of the year is a substantial fall. This movement probably has largely run its course. If stock prices stabilize, it should prove a constructive force in the bond market. The table shows that the price of general bonds felt the force of the recent unsettlement of the bond market.

Table VI shows that the disquieting fall in commodity prices has probably not completely exhausted itself. We have some grounds for hoping that perhaps the most drastic decline is over. Building-material prices are at thoroughly deflated levels as compared with recent years. This, of course, means favorable building prices, if one gets the full advantage of reduced costs of material.

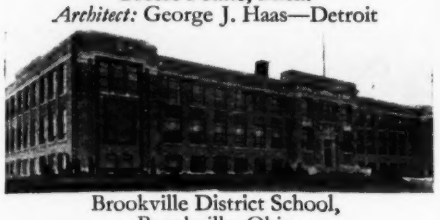
PERSONAL NEWS

♦ SUPT. S. T. NEVELN, of Austin, Minn., has recently been reëlected for a new term of three years. During the ten-year period that Mr. Neveln has been head of the school system, the enrollment has grown from 1,929 to 2,788 students, the per-pupil cost has been reduced from $97.79 to $81.14, while the tax rate has dropped from 47.43 mills to 36.58 mills.

♦ SUPT. J. J. RAE, of Coeur d'Alene, Idaho, has recently been reëlected for a three-year term, at a salary of $4,500 per annum. Mr. Rae, who went to Coeur d'Alene from Caldwell, is completing his fourth year of service in the schools.

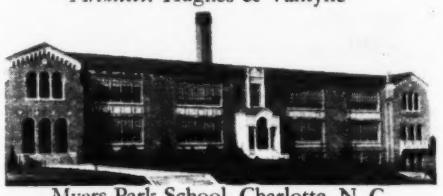
♦ The school board of Cleveland Heights, Ohio, has reorganized, with the reëlection of MR. J. E. CAMPBELL as president, MR. C. H. CLARK as vice-president, and MR. JOHN MAYNARD as clerk.

Grosse Pointe High School,
Grosse Pointe, Mich.
Architect: George J. Haas—Detroit



Brookville District School,
Brookville, Ohio
Architect: Walker & Norwick—Dayton, O.

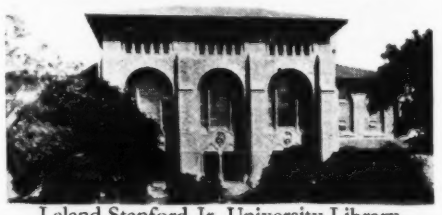
Libby Junior High School, Spokane, Wash.
Architect: Hughes & Vantyne



Myers Park School, Charlotte, N. C.
Architect: Chas. C. Hook

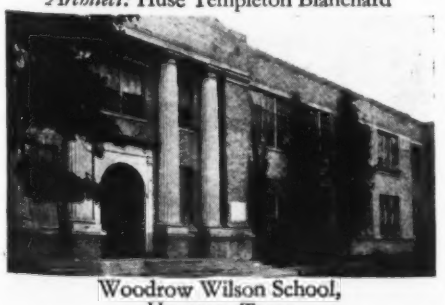
MacFarland Jr. High School,
Washington, D. C.
Architect: A. L. Harris

University of Colorado, Boulder, Colo.
Architect: Day & Klauder—Philadelphia

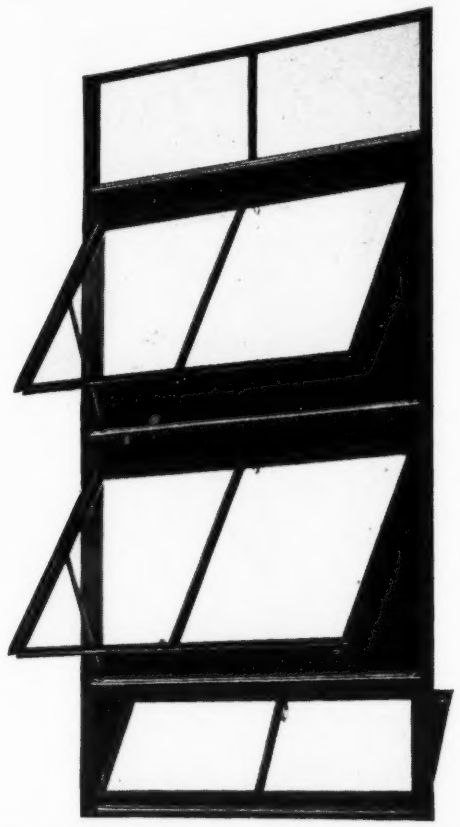


Leland Stanford Jr. University Library,
Palo Alto, Calif.
Architect: Bakewell & Browne—San Francisco

South Side High School,
Rockville Center, L. I., N. Y.
Architect: Huse Templeton Blanchard



Woodrow Wilson School,
Houston, Texas
Architect: Endress & Cato



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Architect: Dougher, Rich & Woodburn,
Des Moines

Technical High School, Salt Lake City, Utah
Architect: Cannon & Fetzer

Abraham Lincoln Jr. High, Rockford, Ill.
Architect: Peterson & Johnson

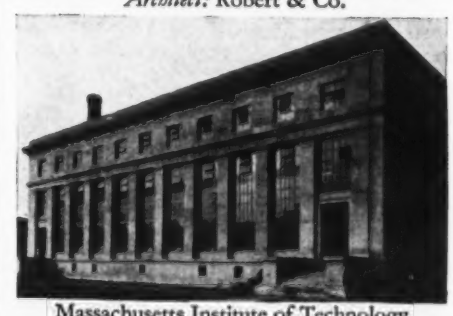
Senior or Cosmopolitan High School,
Reading, Pa.
Architect: Ritcher & Eiler

Cornell University—Myron Taylor
Law School, Ithaca, N. Y.
Arch.: Jackson, Robertson & Adams, Providence

Frank H. Morrell High School, Irvington, N. J.
Architect: Donn Barber—New York City

Charleston Senior High, Charleston, W. Va.
Architect: Warne, Tucker & Patterson

Georgia School of Technology, Atlanta, Ga.
Architect: Robert & Co.



Massachusetts Institute of Technology,
Cambridge, Mass.
Architect: Coolidge & Carson—Boston

Years of Heavy Traffic

and these treads will still be non-slip

Precast Alundum Aggregate Treads can be depended upon to give many, many years of service and to be non-slip throughout their entire life. Made of marble chips and Alundum Aggregate, of alike or contrasting colors, bonded with cement, colored or uncolored, these one-piece treads are suitable for use on plain steel stairways or in conjunction with marble or other decorative materials. They combine attractiveness of appearance with both safety and durability.

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School Finance and Building

SCHOOL BUILDINGS AND STATE BUREAUS

A criticism of the methods used by state departments of public instruction in assisting local school boards in the erection of school buildings, by Mr. William J. Sayward in the *Octagon,* official organ of the American Institute of Architects, has been rather conclusively answered by the state supervisor of school buildings for Wisconsin, Mr. H. W. Schmidt, in a communication to the editor. Mr. Schmidt writes in part:

"The matter of getting adequate school-building service and giving technical information along all lines to rural-school boards and communities intruded itself upon our consciousness some six years ago, due to the fact that the most outrageous examples of rural-school buildings both in planning and appearance came through constantly. In this state as in many others, buildings may be designed by others than architects, provided the term 'architect' is not used. Consequently, we felt that something had to be done to give these districts the proper service.

"We also found, as stated and implied in your article, that most architects could not afford to spend time and considerable effort on the designing of simple one- and two-room structures. I am afraid that much of this work in the past has simply been delegated to the chief or other draftsman in the office of the architect. Consequently, after questioning a number of leading and reputable architects, we undertook to give all types of architectural and engineering service to any who desired to avail themselves of it. The specific architectural service, however, was confined to one- and two-room rural buildings for which we developed complete plans and specifications. The architects commended our attitude on this, and with one exception — and the exception is not a member of the Institute — we have had no complaints.

"Engineering service is not specific to the extent that we develop plans or give specifications for this type of work, but we act in an advisory capacity only. We also make suggestive layouts for buildings of any size, but refuse to commit ourselves on definite planning beyond the limits stated.

"I am very much in agreement with much which the article contains, especially as it refers to stock plans and stereotyped buildings. The writer has felt the limitations imposed by these very definitely and we have constantly refused to design buildings, arrangements, and exteriors which to us did not seem proper and fitting. Only this spring, a county superintendent came to us and said he had eight or nine buildings which were to be replaced in his county and he wished one plan which would serve for all. The department refused to do this and it did not leave a very pleasant feeling with the county superintendent. However, we stood pat and in consequence, we designed three, and the others went to some architect who did the job wholesale. The matter of plastering the state or a community with orthodox buildings is in my mind an aesthetic and architectural crime.

"During the past four years we have sent out 177 different plans for one- and two-rooms. I believe that the orthodox is nonexistent and that our buildings at least bear the stamp of originality. Whether they are of a design which would be universally commended is an entirely different matter. If we can design buildings, such as the Elm Grove, and others, I believe this state is in no danger of being made subject to an architectural program for rural schools which would be considered detrimental.

"I am not giving you the above information in any apologetic attitude, nor as a defense of the article, but I am presenting it purely on the basis of what this department considered a good policy toward the rural communities and to the state building program in general."

A SCHOOL AUDITION SYSTEM

The microphone is coming to the rescue of acoustics. Where these are defective in auditoriums and public halls the so-called audition system helps out. C. B. Baldwin, district superintendent of Huntington Beach, Calif., elementary schools, recently said:

"The acoustics of our auditorium, built some fifteen years ago, have been very troublesome. A speaker on the stage could not always be clearly heard to the rear or the middle of the room. Now we have a level volume to the back of the room, totally devoid of any 'horny' or 'tinny' quality of tone. The rear seats are now the most popular!

"In this connection we are giving our pupils training in speaking before the microphone, which process, of course, requires 'stage presence,' distinctness of enunciation, voice control, modulation, and withal the will to interest one's hearers. In our dedication, pupils made the announcements to their fellows in classrooms and to the audience.

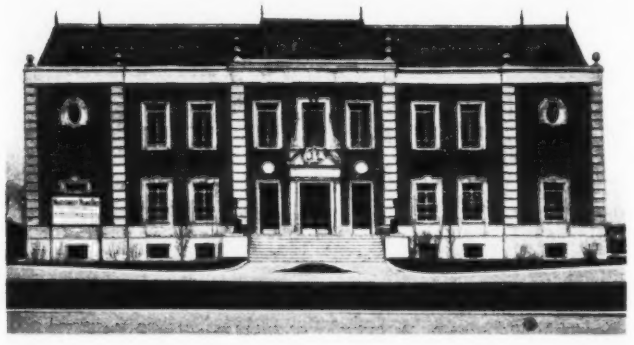
"Secondly, all rooms and corners of the plant are in immediate touch with the superintendent's office. As a mechanism to convey a personal message simultaneously and with great dispatch to all points of our system, it gives complete satisfaction. Within sixty seconds after a need arises to give notice of some very necessary item, it can be given to literally every person on our campus with only one announcement to all. In case of fire, for directing in emergency ways, it would prove invaluable."

BUILDING NEWS

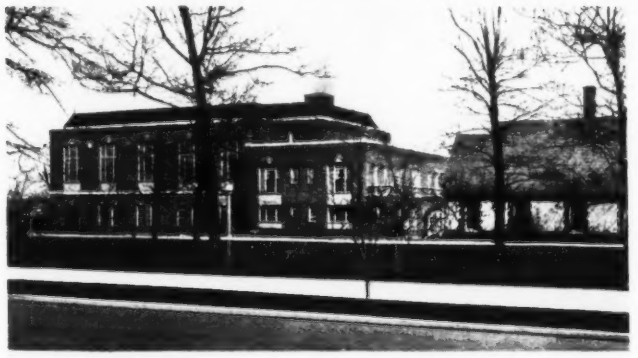
♦ Dayton, Ohio. Coincident with its policy of placing building programs on a pay-as-you-go basis, the schools will have increased the housing facilities during the year 1930–31 by two additional schools and one addition. Two of these buildings have been completed, and a third will be ready for use within the next few months. The two building projects in North Dayton, representing an expenditure of about $375,000, were paid for under conditions of the bond issue authorized in November, 1929.

(Continued on Page 70)

SIMONS PARK FIELD HOUSE



RIIS PARK FIELD HOUSE



BLACKHAWK PARK FIELD HOUSE

KELVIN PARK FIELD HOUSE

GOOD FOR PLAY
GOOD FOR WORK

SCHOOL executives who are planning to build or remodel a gymnasium will be interested in one item of the equipment of the Northwest Park Field Houses, in Chicago. All four buildings illustrated have gymnasium floors of Sealex Battleship Linoleum.

Durable, shock-absorbing, sanitary—Sealex Battleship, Jaspe and Inlaid Linoleums have long been known as ideal floors for classrooms and corridors. They succeed equally well in the gym.

For basketball and handball, Sealex Linoleum gives an excellent playing surface. In addition to being a good floor for walking, playing, working, and dancing—it is *safe* . . . a safe floor to fall on! Physical directors tell us the type of injury known as "floor burns" is practically eliminated when this resilient, "no-splinter" material is installed.

An interesting point in the gymnasium shown is that the marker lines are as permanent as the floor itself. They are linoleum, actually inlaid in the floor. For further information on resilient school floors, address our Department 60.

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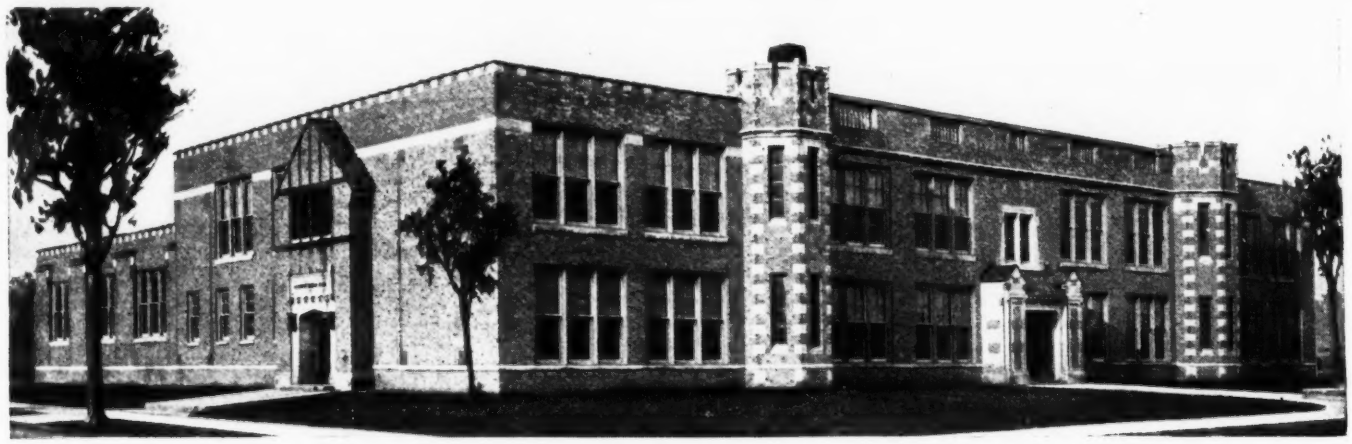

Alexander Macomb School, Detroit, Michigan. N. Chester Sorensen, Architect, Detroit
Glazed with Libbey-Owens-Ford "A" quality glass

IN school buildings it is essential that only highest quality glass be used for windows. The fact that school board architects and officials accord an overwhelming preference to Libbey-Owens-Ford "A" quality glass is ample proof of the fact that this glass *is* of definitely higher quality.

TUNE IN! FLOYD GIBBONS — *Sunday Evenings — L-O-F Radio Program — 9:30 E. S. T. — WJZ and Associated NBC Stations.*

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flat drawn clear SHEET GLASS

(Continued from Page 68)

♦ Lincoln, Nebr. The school board has adopted a modified ten-year building program, prepared by Supt. M. C. Lefler. An appropriation of $2,500,000 will be made and construction work on some of the buildings will start immediately.

♦ Leominster, Mass. The school board contemplates the erection of a four-room addition to one of the elementary schools during the next year. The building will be completed at a cost of approximately $40,000.

♦ Portland, Oreg. New school buildings, additions to buildings, and one new playground, with improvements were carried out during the year 1930, at a cost to the school district of $1,390,477. Buildings now under construction and to be completed during 1931 will cost approximately $1,271,111. The school board is completing plans for the Rigler school, to be erected at a cost of $195,258, and the Irvington building, to be completed at a cost of $275,000. Construction work has been started on the second unit for the Beaumont School costing $76,892, and a new stock and supply room at the Benson Polytechnic School, to cost $16,000.

♦ Kenmore, N. Y. The school board completed the erection of an elementary school during the past year, at a cost of $32,762. An addition for another elementary school was built, at a cost of $5,975. The school board contemplates the erection of at least one school building during the year 1931.

♦ Amityville, N. Y. The voters of the city defeated a bond issue for $225,000 for school-building purposes.

♦ Sherman, Tex. The school board recently sold school bonds in the amount of $90,000. The proceeds of the bonds will be used for the erection of an elementary school.

♦ Lorain, Ohio. The school board has taken steps to carry out its first major building program without the necessity of a bond issue. It is believed that there will be a saving of from 50 to 100 per cent in the cost of construction, due to the fact that there is no interest to pay on bonds. A year ago, the school board established a special building fund as a means of eliminating the necessity of bond issues for building construction.

In a year's time the building fund accumulated approximately $48,000, which includes $18,000 transferred from the 1929 balance in the general fund, and $30,000 representing the anticipated balance at the end of the present year. A $25,000 tax levy will raise the total to $73,000, plus the interest which the $18,000 has accumulated.

♦ Milwaukee, Wis. A school-building program, involving an expenditure of $4,600,000, partly under construction and largely to be completed in 1931, has been announced by Mr. Walter Alexander, chairman of the school board's building committee.

The program includes three high schools and six graded schools. Of the three high schools, the Steuben Junior High School will be completed during the year 1931, at a cost of $375,000. Plans have also been completed for the junior-senior high school on Capitol Drive, involving a cost of $1,250,000, and the Junior High School, to cost about $700,000. Of the graded schools, the Garden Homes School, costing $400,000, will be completed early in the year. Plans have been completed for the Hartford School, to cost $250,000; the Bay View School, to cost $375,000; and an addition to the Story School, to cost $250,000. Construction work has been started on the new wing of the Girls' Trade School on Wells Street.

The school board has $2,600,000 available for 1931, and all the work covered by that amount is under construction or will be completed before the end of the year.

♦ The Chicago board of education has agreed upon four standard types of high schools. The smallest seats 1,500 children, the largest 3,000. In comment thereon the *Chicago Tribune* says: "A junior high school with 1,500 pupils is too large. A school housing 2,500 or 3,000 is an educational monstrosity. We do not know the optimum size of junior high schools, but we should say that any school so large that the principal did not know pretty intimately every child in his care was too large. No principal can have sound basis for judging his teachers and their methods unless he has ample opportunity to observe them at work and unless he knows the children with whom they are working. The principal of a junior high school seating 1,500 cannot know the children."

♦ Manitowoc, Wis. The city council recently approved school bonds in the amount of $450,000 for the beginning of construction on a junior high school and a vocational school. Architects Van Ryn & DeGelleke, of Milwaukee, have completed plans and specifications for the junior high school, which is to be completed by September 1.

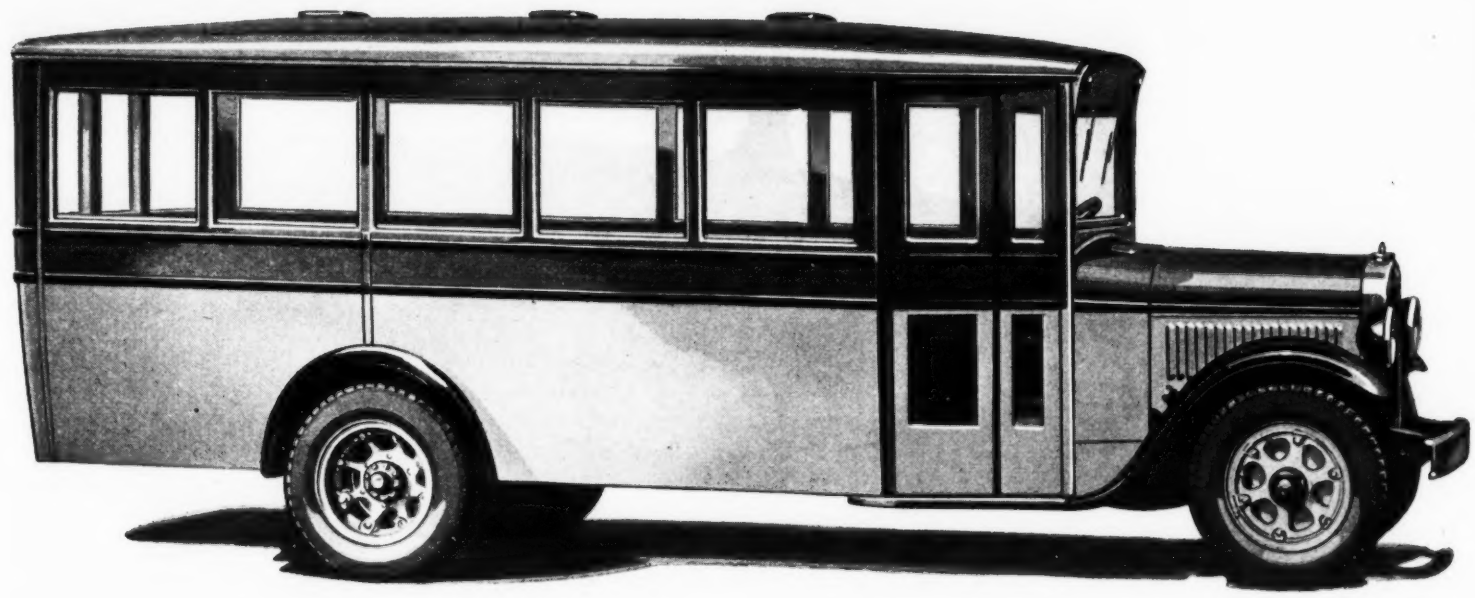
♦ The voters of San Antonio, Tex., recently approved a school-bond issue of $1,750,000. The proceeds of the bonds will be used for school-building purposes.

♦ Milwaukee, Wis. The special building committee of the board has undertaken a revision of the board's five-year building program. During the year 1931, an effort will be made to increase the building expenditures to about $500,000.

(Concluded on Page 72)

THE PRESENT DEPRESSION

There is nothing to worry about in the present situation. Both spiritual and economic conditions will recover and be better than ever in the past. Their interrelation, however, should fearlessly be taught. People should understand that before prosperity can return there must be a renewed interest in the spiritual life by both individuals and nations. Nations should realize that the world has always possessed raw materials and labor; but has been prosperous only when the people have been actuated by a religious faith to use these resources for advancement and service. This is the law of life and now is the time when it should be taught in churches, schools, and colleges. Think it over during 1931. — Roger Babson.



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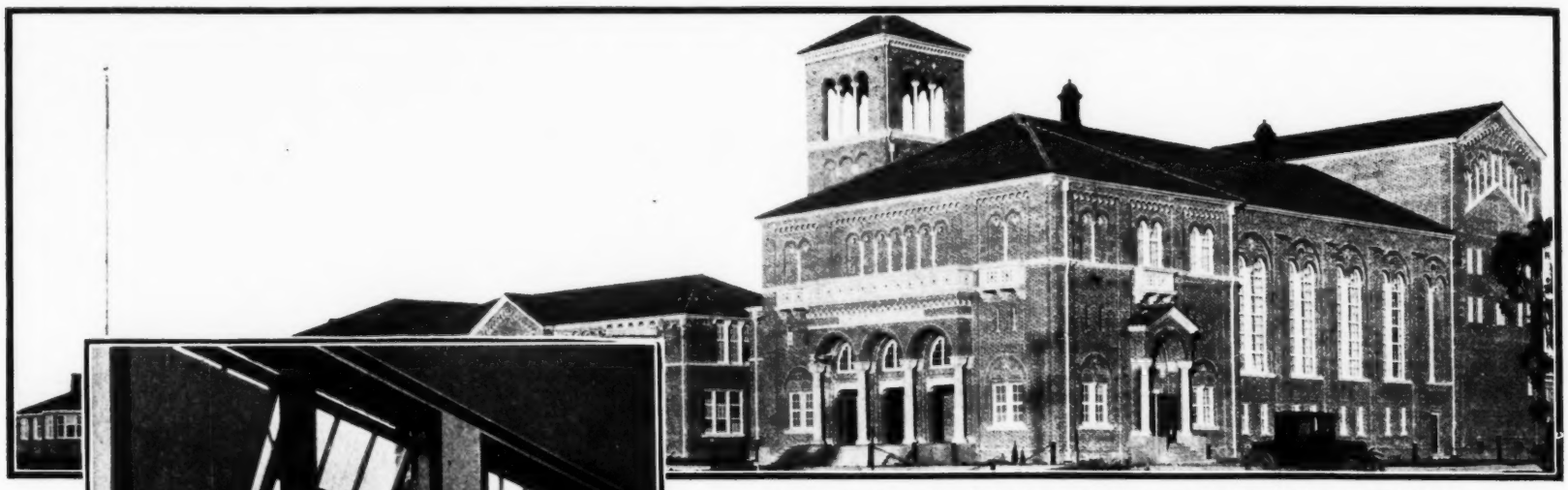

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are hygienically correct. Specially adaptable for the modern needs of school buildings. Recommended and in wide use to meet lighting and ventilating requirements. Sturdy, attractive and economical.

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UNIVERSAL WINDOW COMPANY
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OAKLAND, CALIFORNIA

(Concluded from Page 70)

Construction which will consume the 1931 building appropriations includes two junior high schools, a senior high school, a girls' technical school, two grade schools, and three annexes. The average yearly expenditure of the five-year program has been about $2,100,000.

♦ Kenilworth, Ill. Plans have been prepared for an extensive enlargement of the New Trier Township High School. The building program which will cover a period of two years, will provide additional classroom space. It will be financed through a bond issue of $875,000 which was recently authorized by the voters.

♦ Rockford, Ill. During the year 1930, the school board completed the erection of the Welsh elementary school. The school which contains twelve classrooms and an auditorium-gymnasium, is located on a five-acre site. A definite beginning has been made toward simple landscaping of school sites. The work is done by the park board at cost.

♦ Pottsville, Pa. Bonds in the amount of $900,000 have been approved by a vote of the citizens. The proceeds of the bonds will be used for school-building purposes.

♦ Sioux City, Iowa. A school for janitors and engineers is being conducted under the auspices of the extension department of the Iowa State College. The course will extend over a period of twelve weeks and will pertain to problems of heating, maintenance, and the cleaning of school buildings.

♦ The proper maintenance of schools and public buildings by janitors and engineers is the subject of a course being given by the extension division of the University of Wisconsin. Through weekly lectures by the state department's engineering staff, custodians are offered instruction on the aspects of heating, ventilation, and general maintenance of school buildings. Among the subjects covered in the courses are fuels and combustion, operation of the heating plant, building management, care, and supervision, sanitation, and temperature control.

♦ Detroit, Mich. The school board has plans for seventeen schools to be erected during the year 1931, at a cost of approximately $4,214,757. Eight school buildings, at an expenditure of $1,500,000, are proposed for the new building program of 1931–32. At the present time, the board has 23 schools under construction, to be completed at a cost of $4,541,024. Ernest O. Fox, superintendent of buildings.

♦ Grand Rapids, Mich. For the year 1931 the school board has planned the construction of an addition to the Palmer School, and an enlargement of the Union High School, at a total cost of $140,000. The board has completed additions to four high schools, at a cost of approximately $900,000. L. A. Butler, superintendent of schools.

♦ Buffalo, N. Y. The school board has under construction at the present time, three elementary schools, and two additions to elementary schools, at a cost of approximately $500,000 each. A site has been purchased for another elementary school, to be erected at a cost of $29,500. The board contemplates the erection of a continuation school some time during the next year. E. C. Hartwell, superintendent of schools.

♦ Muskegon, Mich. The voters have recently approved a proposition calling for the erection of the Angell-Pillsbury School, at a cost of approximately $400,000. Construction work will start early in the spring and the building will be ready for use in September.

SCHOOL-BUILDING PROGRAMS

Tucson, Ariz. The school board has a four-room school under construction, which is to be completed on March 1, at a cost of $27,000. During the past summer the board completed a building program, comprising a junior high school, an elementary school, and additions to eight elementary schools, at a cost of approximately $500,000. C. E. Rose, superintendent of schools.

Washington, D. C. During 1931 the school board plans an extensive school-building program, calling for the erection of two junior high schools, at a cost of $1,000,000; two elementary schools, at a cost of $220,000; and seven additions to existing structures. There will be no bond issues. J. J. Crane, first assistant superintendent of schools.

Topeka, Kans. The school board has under construction a new senior high school, to be completed at a cost of $1,100,000. During the year 1931, the school board plans the erection of a junior high school, at a cost of $185,000, and a new grade school, at a cost of $125,000. No bond issue is contemplated for 1931. A. J. Stout, superintendent of schools.

Lynn, Mass. The school board has under construction the new Eastern High School, to be completed at a cost of approximately $1,500,000. E. Stephens, deputy superintendent of schools.

Kansas City, Mo. During the year 1931 the school board plans a large addition to the East High School, to be completed at a cost of approximately $400,000; and an addition to the Fairmount Elementary School at a cost of $200,000. In addition, the board contemplates improvements to two high schools, to be completed at a cost of $100,000. The board has under construction a new elementary school, to cost $210,000, and additions to two existing schools, at a cost of $249,000. During 1930 two new schools and six additions were completed.

Sand Springs, Okla. The school board contemplates an expenditure of $20,000 for school-building purposes during 1931. The board has new building projects under construction which will be completed at a cost of approximately $100,000. H. C. Fisk, superintendent of schools.

Pottsville, Pa. The voters recently approved a bond issue of $900,000 for a new high school. Mr. William B. Ittner, of St. Louis, Mo., is the architect. L. A. BuDahn, superintendent of schools.

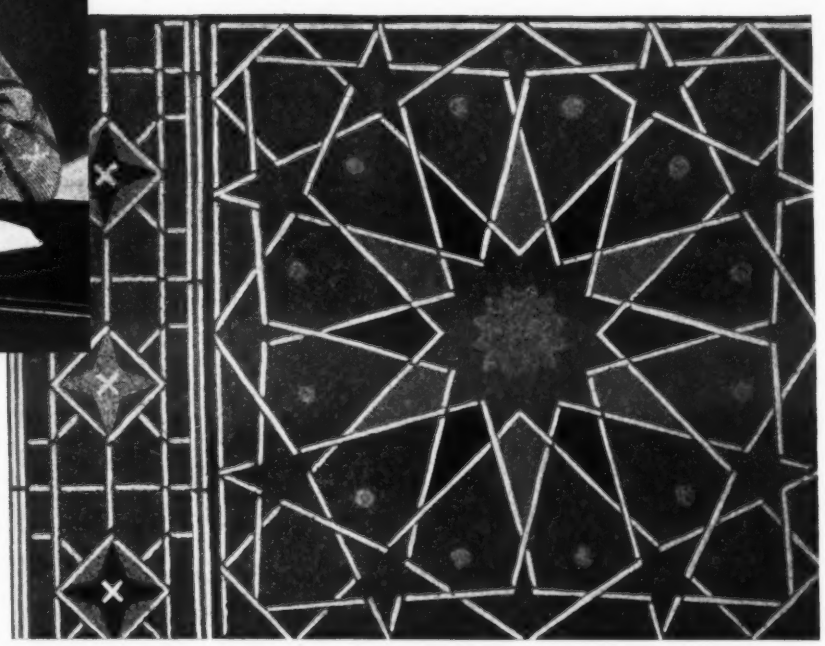
New York, N. Y. The school board contemplates an expenditure of between $40,000,000 and $50,000,000 for school-building purposes during 1931. The board has under construction at the present time an extensive program of school buildings, calling for the erection of elementary schools and additions at a cost of $1,370,000, and high schools and additions at a cost of $21,470,000. The entire program will be completed during 1931, at a cost of approximately $47,325,000. H. A. Shiebler, secretary to the superintendent.

Tacoma, Wash. The school board contemplates the erection of two elementary schools during the year 1931. The building program will be dependent on the action of the state legislature in providing the necessary financial assistance. W. F. Geiger, superintendent of schools.

Cleveland Heights, Ohio. The school board has under construction a 20-room addition to the high school, to cost approximately $225,000. A 10-room addition to the Taylor elementary school has been completed, at a cost of $100,000. No additional building projects are planned for the year 1931. W. G. Nesbit, director of schools.

"NOISE FOG" is the CAUSE . . of AFTERNOON FATIGUE

Above: Does teacher blame noise for this pupil's failure?



Right: Designs like this are easily applied to ceilings of Armstrong's Corkoustic.

FOOTSTEPS in the corridor, the bubbling of the drinking fountains, doors closing—noises so familiar you may not even notice them, fatigue immature minds. These sounds build up a reverberating "noise fog" that distracts attention, makes schoolwork difficult.

But noisy school buildings are unnecessary. Armstrong's Corkoustic applied direct to walls and ceilings absorbs air-borne sounds, makes rooms quiet and restful—effectively muffles "noise fog."

While the primary purpose of Corkoustic is to hush echoes and reverberations, the interestingly textured panels of cork lend themselves readily to a wide range of decorative effects. The natural color of Corkoustic is a rich brown, providing a beautiful and dignified effect in rooms where conservative treatment is desired. The various sized units can be combined in patterns that are limited only by the ingenuity of the designer. Colors and stencilled designs are readily obtainable with cold water paints.

Armstrong's Corkoustic, being a pure cork product, also effectively prevents heat loss through walls and ceilings. Cork lined rooms are warmer in winter and cooler in summer. Constant temperatures are easy to maintain, and the heating response is greatly accelerated, an important factor in intermittently heated buildings. There is a welcome saving in fuel, too, when heat is not dissipated through walls and ceilings lined with Corkoustic.

All of the interesting facts about Armstrong's Corkoustic are presented in the book "Acoustical Correction." A copy will be sent you upon request without charge. Address Armstrong Cork & Insulation Company, 954 Concord Street, Lancaster, Pennsylvania.

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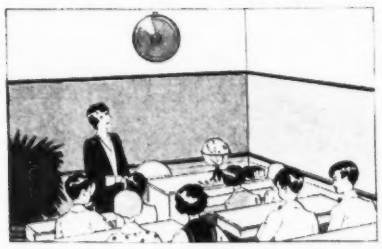
To eliminate noise and absorb vibration of moving machinery, we suggest the use of Armstrong's Cork Machinery Isolation. Fans and motors of the ventilating system, pumps, printing presses, and other types of equipment can be effectively silenced by resilient cork. And machines last longer when vibration is checked. All the advantages of cork-cushioning can be secured at very moderate cost. Write for our pamphlet "Data and Details of Armstrong's Cork Machinery Isolation."

Armstrong's CORKOUSTIC

The modern acoustical insulating treatment

The principal spreads himself



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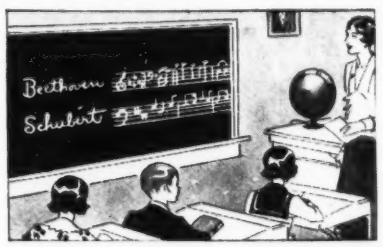

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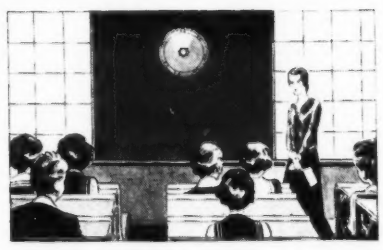

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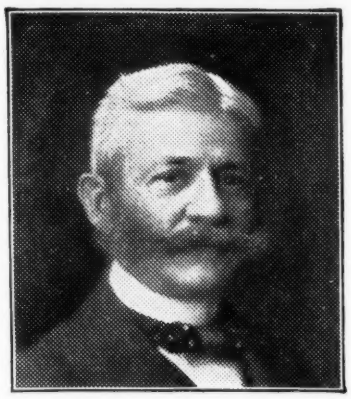

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SCHOOL FINANCE AND TAXATION

WEST VIRGINIA'S SCHOOL-FINANCE PROGRAM

The educators of West Virginia have proposed the creation of a relief fund, whereby every district is to receive $300 for its elementary teachers' fund, and $75 for each elementary teacher, supervisor, or principal in the state.

"It will contribute to every district in the state, whether independent or nonindependent, $450 to its high-school teachers' fund and $125 to its high-school maintenance fund for each high-school teacher, supervisor, or principal in the state.

"The second step in the proposed program is the creation of an equalization fund of $1,500,000. This fund will enable every district in the state to provide the minimum elementary-teachers' salaries and maintenance at a levy of 50 cents or less.

"The third step in the proposed program is the creation of a fund for assisting poor districts to consolidate with others and construct better school buildings. In many districts of the state, the school buildings are a disgrace to any civilized community. A study of the following facts will explain why this is true.

"The state does not assist local districts in their building programs. Buildings must be constructed by levies raised on property in the local districts. The maximum levy, without the consent of the state superintendent and state tax commissioner, is 20 cents on the $100. In most of the poorer districts in recent years, the tax commissioner has refused request for the additional 20-cent levy.

"The assessed valuation of property in each of 58 districts in West Virginia is less than $1,000,000. The assessed valuation in each of 119 more is less than $2,000,000. The assessed valuation in each of 57 others is less than $3,000,000. In other words, 234 out of 393 districts in the state, have an assessed valuation of less than $3,000,000. The average valuation of these districts is approximately $1,500,000.

"The fourth step in this program is the creation of a fund of $225,000 for providing school management and supervision in districts that are now without it.

"Almost three fourths of the districts of the state are without any supervision, except that of a county superintendent of schools. This is a crime both to the children and to the taxpayers of these communities. A child nowadays has a right to know that his physical, intellectual, and spiritual destiny is guided by someone other than a young, inexperienced, second- or third-grade teacher."

A STUDY OF BOND ISSUES IN OHIO

During the past three years the bureau of educational research of the Ohio state education department has gathered information on the bond issues and special levies submitted to the voters in various communities of the state. Since practically all of the capital outlay in Ohio has been financed by means of bond issues it is believed that readers will be interested in a study of this material. It should be noted that there has been a rather significant reduction in both the amount of bond issues submitted, and in the amount which have been approved. This means, of course, that there has been considerably less school building this past year. While building costs are in the present situation, it is rather unfortunate that more districts have not taken advantage of present building prices.

The present study takes the form of an analysis of both bond issues and special levies submitted in November, 1930. Two tabulations were made, one for cities and exempted villages, and one for county school districts. The number of counties submitting bond issues was 55, and the total number of bond issues submitted reached 105. Of the total, 58 bond issues were carried, and 47 failed. The range of percentages for bond issues which failed was 18–54 while the percentage for those which failed was 55.9 per cent. The number of counties submitting special levies was 73, while the total number of special levies was 343. The number of special levies carried was 235, and the number which failed reached 108. The percentage for levies which carried was 51–100, and the percentage for levies which failed was 14–50. The per cent of total number of levies submitted which carried was 68.5.

A study of the cities showed that there were 7 bond issues submitted, of which 4 carried, and 3 failed. The total amount of bond issues submitted was $1,553,000, of which $545,000 was carried, and $985,000 was defeated. The per cent of total number of issues carried was 57.1, while the range of percentages for issues which carried was 60–73. The percentage of total amount of issues which carried was 35.6, while the percentage of issues failing was 64.4. There were 22 special levies submitted, of which 21 were carried. The range of percentages for issues which carried was 56–96, and the per cent of total number of issues submitted which carried was 95.4.

The number of bond issues submitted in exempted villages was 6, of which 4 were carried, and 2 were defeated. The total amount of bond issues submitted reached $1,172,500, of which $1,040,000 were carried, and $132,500 failed to be approved. The average per cent of votes favoring issues which carried was 63.7. The percentage of total amount of issues submitted which carried was 88.7. There were 14 special levies, of which 12 were carried. The range of percentages for issues which carried was 58–83, and the per cent of total number of issues submitted which carried was 85.7.

STATE EQUALIZATION SCHOOL FUNDS

"Differences in wealth, school revenues, school tax rates, and consequently differences in the quality of educational opportunities, similar to those which exist among the school districts and counties are to be found to a greater or lesser degree in nearly every state in the Union."

The statement is set forth by Dr. Fletcher Harper Swift in a discussion in the *Sierra Educational News* on the subject of a state equalization as applied to California.

In looking over the country at large in enumerating the states which maintain an equalization fund derived from various types of taxation, Dr.

The Fordson High School, at Fordson, Michigan, Would Naturally Have Finest Equipment— Hartshorn Joanna Cloth Window Shades

SINCE modern education teaches that it is true economy to buy the best, the Fordson High School, at Fordson, Michigan, makes this rule practical with time-tested window shade equipment... The Joanna Cloth of the shades, and the never-failing shade rollers were made by Stewart Hartshorn —a name that is synonymous with enduring satisfaction.

STEWART HARTSHORN COMPANY, 250 Fifth Avenue, New York City

Hartshorn Est. 1860

SHADE ROLLERS *and* WINDOW SHADE CLOTH

Swift finds the following: Arkansas, cigar and stamp; Georgia, gasoline; Maryland, property; Montana, oil, inheritance, and metal mines; New Jersey, general property; Oklahoma, limited severance. In discussing the subject in its broader aspect he says:

"A study of the policies of school support of our various states would show that no movement has been more marked during the past 15 years than the creation of equalization funds.

"This statement can be supported not only by the steadily increasing number of states which, after careful study, have adopted equalization-fund plans, but by the tendency within these states to extend their respective plans.

"Many examples might be given. Perhaps the most interesting is that of New York. In 1925 New York created an equalization fund in accordance with a plan drawn up by Professor Paul Mort of Columbia University. The act of that year excluded from equalization grants all rural schools and all elementary schools which did not provide academic secondary instruction.

"Two reasons for these limitations were given by those responsible for the New York plan. First, that the excluded districts were sufficiently provided for by other state grants; second, that extending equalization grants to inadequately organized districts would tend to retard consolidation.

"It is especially significant that after four years experience with this policy of limited equalization, New York in 1929 passed a law whereby the equalization-fund plan was made to include all classes of schools and all types of districts. This extension was provided for by two acts. One of these extended the plan already in force to all schools except one-teacher rural schools. The second act created a separate equalization fund for such one-teacher rural schools."

SYSTEMATIZING THE RECORDS OF SCHOOL BUSINESS

A great many cities employ high-grade professional experts with a splendid background of training and information to fill the office of superintendent. Frequently, it takes an entirely different type of schoolman to meet a variety of people, and to manage a school board and handle the many outstanding problems of school management.

Mr. Joseph A. Ewart, superintendent of schools of Stamford, Conn., has been most successful in the presentation of reports to the school board. He has evolved a very useful outline of business, which has proved of great assistance at the regular board meetings. The order of business calls for (1) approval of minutes of previous meeting; (2) communications; (3) approval of reports of school officials; (4) reports of committees; (5) substitute vouchers; (6) approval of allowances and deductions; (7) new business; (8) seasonal business, e.g., annual election of personnel of the school department; (9) annual business, e.g., annual budget of the school year.

The report of each meeting of the board is kept on file in a special folder which is on file in the superintendent's office.

COMPARATIVE COST OF EDUCATION FOR RURAL AND CITY CHILDREN IN NORTH CAROLINA

The North Carolina department of public instruction in a recent report, shows that approximately $16 more per pupil is expended for the education of a city boy and girl than is spent for a rural child. The per-pupil expenditure in city schools is $44.50 per year, whereas in rural schools, an average of $28.57 is expended for each pupil enrolled.

A study of the total expenditures for current expense classified according to functions for rural and charter schools shows that the sum of $18,155,279 has been expended for the benefit of 635,537 rural children. A total of $9,806,252 was expended for 220,345 children in charter and city districts.

The charter schools, it was shown, expended 80 cents out of every $1 for instructional service, whereas rural schools spent 74.5 cents of each dollar for the purpose. The rural schools expended a smaller percentage of the dollar for all purposes, except fixed charges and auxiliary agencies. Due to the transportation of pupils in rural schools, the percentage expended for auxiliary agencies is much larger in those schools than in charter schools.

FINANCE AND TAXATION

♦ Lorain, Ohio. The school board has paid off $117,500 of its bonded indebtedness during 1930, which reduces the debt to $1,410,225, the lowest in years. During the year 1931, the board will pay off $116,725 more. A pay-as-you-go plan has been adopted, with the establishment of a building fund. Under the plan, the board will eliminate the necessity of issuing further bonds. It is expected that the bonded indebtedness will be wiped out by 1948, with a reduction in the cost of operating the schools.

♦ A number of schools in Belmont county, Ohio, were unable to pay 60 teachers their wages recently, because of a shortage of funds. Failure of the county to start its December tax collection made it impossible for the districts to get advances on their February apportionments.

♦ Columbus, Ohio. The board of education has been asked to approve an appropriation of $6,575,000 for the schools during the coming year. The board reported a cash balance of $300,000, the largest in recent years.

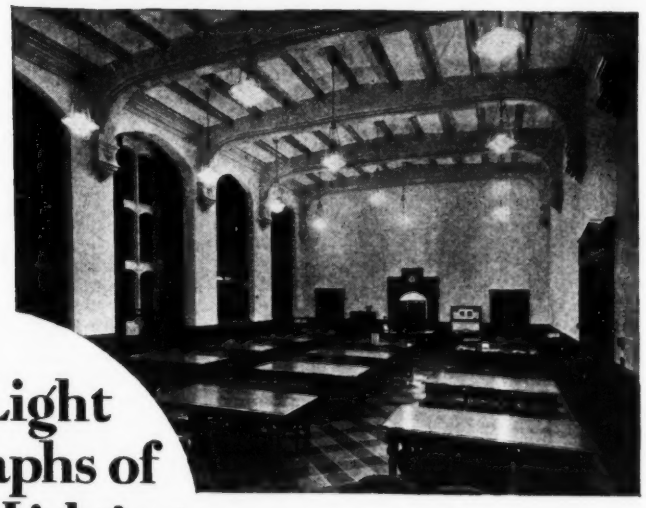
♦ The school board of Rockford, Ill., has adopted a budget for the school year 1930–31, calling for a total of $1,731,124, as compared with $1,859,550 for last year. The new budget represents a reduction of $128,425 from that of 1930.

♦ Milwaukee, Wis. Milwaukee county will receive $590,638 of the state school-fund income, under the distribution of the state education department. The total income this year was $6,486,070, of which $5,809,007 was distributed among the several counties of the state. The last appropriation was $5,701,588, although the income yield was $6,578,547.

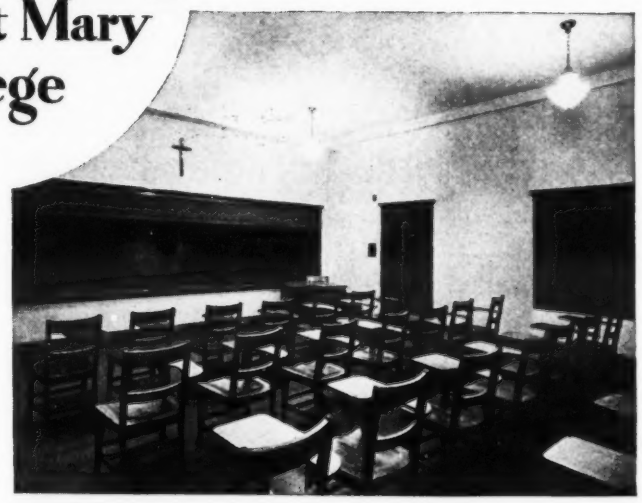
Salaries and expenses this year will claim $677,067, the state department reported. A mill tax of 1.1 is levied on the taxable property of the state for the public-school-fund income. The state apportions $250 for each teacher, to which the counties add a like amount.

(Concluded on Page 78)

Have You Ever Seen a Better Lighting Installation Than This?



Night Light photographs of Holophane Lighting in Mount Mary College



DESIGNED and built to be one of the finest girls' colleges in the country, Mount Mary College in Milwaukee is lighted throughout with Holophane Units.

In the classrooms and most other rooms the architects, Herbst & Kuenzli, used Holophane Filterlites because they felt that these units provide the best illumination, besides giving a quality of light which blends better than any other with daylight (thus making it possible to use artificial illumination to better advantage on cloudy days).

In the corridors, Holophane directional corridor units are used; in the bookstack room Holophane bookstack units spread light evenly over shelf after shelf of books.

There is a specific Holophane Unit for every lighting requirement. May we help you with your lighting problems?

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The Light Socket Unit That Replaces
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Endorsed by these equipment manufacturers everywhere.

Easy to Connect — Permanent
Silent — No Hum — No Attention or Maintenance Needed.

Natsco Transformer sales increased every month in 1930, a positive indication that they just naturally perform something the public wants.

In ordering please give voltage, approximate current drain and description of apparatus to be powered.

NATIONAL TIME & SIGNAL CORPORATION

7700 GRAND RIVER AVE. DETROIT

THE NATSCO LINE

(Concluded from Page 76)

♦ During the year 1930 more than 25,000,000 pupils were instructed in the United States, at a cost of $2,000,000,000, according to a statement issued by William John Cooper, United States Commissioner of Education. The teachers employed numbered about 850,000.

♦ The school board of Port Arthur, Texas, has recently issued a report, showing the expenditures and per-capita school costs covering the operation of the schools for the year 1929–30. In the preparation of the report, the expense and per-capita costs were worked out from two angles. First, the total expenditures regardless of nature, and second, comparable expenditures eliminating the items as listed on the sheet.

The report shows that the total expenditures amounted to $836,994 and the per-capita costs to 99.16. The comparable expenditures were $803,515, and the per-capita costs were 95.19. The largest item in the list of expenditures was instructional service, which amounted to $475,067. Operating expenditures were second, with $80,220. Debt service amounted to $153,606 and capital outlay was $7,035.

The items of expense deducted to arrive at comparable costs with a majority of schools were:

General control (business administration)		
architects' fee	$540	.063
interest and loans	888	.105
General control (educational)		
research	9,368	1.11
attendance officers	2,288	.27
instructional service	778	.09
fixed charges	12,438	1.48
	$33,479	3.97

During 1928–29, expenditures in the first eight divisions increased $134,570, or 24½ per cent. The average daily attendance increased 1,069, or 14½ per cent. The bulk of the increased expenditures for the past year went toward the new junior high school and its governing staff.

♦ San Antonio, Tex. A bond issue in the amount of $1,750,000 has been approved by the voters. The proceeds of the bond issue will be used for school-building purposes.

♦ Detroit, Mich. The school board has completed plans for school construction during the coming year to involve an expenditure of $2,975,170. The building program calls for the erection of eight elementary schools, three intermediate schools, two senior high schools, one special, and one vocational school. A number of additions to elementary schools will be erected, at a cost of approximately $100,000.

♦ Pottsville, Pa. The school board has taken steps toward the erection of a new high school. In an agreement entered into with the citizens, the board must give preference to local men in the matter of employment and materials.

♦ Fremont, Ohio. School bonds in the amount of $244,000 have been sold to a bonding concern by the board of education. The proceeds of the bonds will be used to retire short-time notes issued during the construction of new school buildings.

TEACHERS' SALARIES

♦ Minneapolis, Minn. At a recent meeting of the school board, a resolution was adopted, providing that the teachers' automatic salary increase allowed in the salary schedule adopted by the members, be suspended after the school year 1930–31. All teachers' contracts will hereafter be based upon such suspension. A motion was made and carried that the superintendent and his staff be directed to undertake a survey before April 1, of salaries paid employees beginning with the assistant superintendents, with a view of presenting a definite plan for a percentage cut.

♦ Teachers' salaries, based on enrollment, are higher in Cleveland than in Toledo, Columbus, Akron, Youngstown, or Dayton, according to figures given by Mr. L. C. Bain, head of the school accounting department.

Mr. Bain pointed out that, the cost per pupil, figures on teachers' salaries is $53.90 in Akron; $65.86 in Youngstown; $69.74 in Dayton; $74.46 in Columbus; $77.37 in Toledo; and $78.90 in Cleveland.

In supervision, Cleveland ranked low with $1.18 being spent per pupil in salaries. Akron's cost was given as $3.89; Youngstown's as $5.67; Dayton's as $6.11; Columbus' as $7.95; and Toledo as $7.28.

MORE SCHOOLING CALLED FACTOR IN HELPING JOBLESS

Mr. W. G. Carr, assistant director of the research division of the National Education Association, writing recently in the *New York Herald,* points out that unemployment is seriously aggravated by existing child-labor conditions. He points out that, while many persons who should be at work cannot find jobs, about an equal number who might well be in school are employed in gainful occupations. Children are made to suffer doubly when unemployment strikes the family. Enforced idleness for the father may send children into industry when they should be in school.

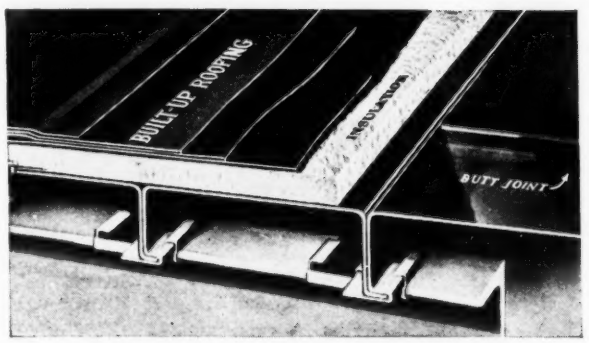
An estimate of the extent of child labor in the United States at the present time is indicated in the statement that if children of school age were relieved from wage-earning and given educational opportunities enjoyed by more favored companions, some 200,000 jobs would be opened up to relieve the present situation. In short, there are normally more children at work than there are unemployed adults who are seeking work.

Of the 31,000,000 children in the country, 27,700,000 are enrolled in school, leaving 3,300,000 who are not enrolled in elementary or secondary schools. The total out of school but not employed is estimated at 1,180,000, while the total of employed children 5 to 17 years of age reaches 2,120,000.

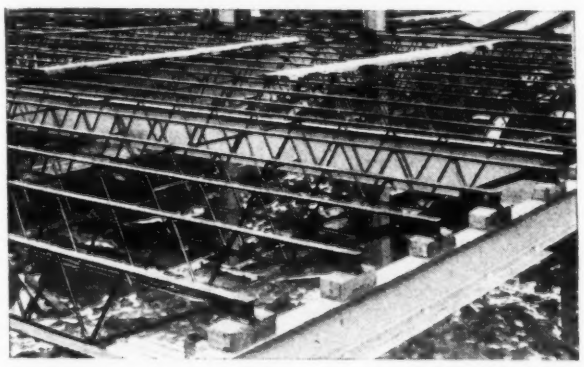
What would happen if these 2,120,000 young people were taken out of shops, factories, canneries, cotton mills, hotel elevators, coal mines, and placed in school? Certainly, one of the immediate results would be to create jobs for an equal number of men and women who are now seeking them. It would create as many jobs as the normal average unemployment as determined by the President's committee.

To instruct this new army in the schools would require 80,000 additional teachers and other thouands of new school employees. Hundreds of new school buildings would be required, which would stimulate the building industry and give jobs to tens of thousands more.

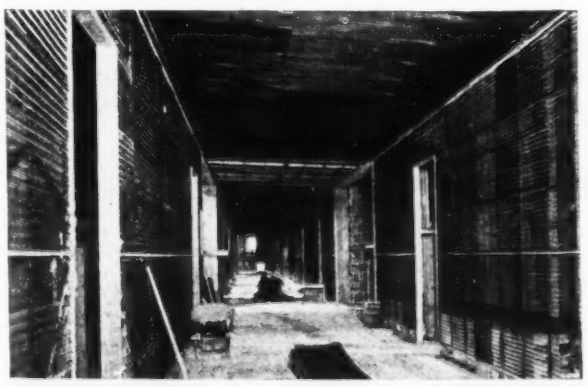
Health and Safety in Modern Schools



Steeldeck Roofs, insulated to any degree and waterproofed, make schools warmer in winter, cooler in summer, and are fireproof.



Steel Joist construction is light in weight, soundproof and fireproof. The open web permits pipes to pass in any direction.



Soundproof partitions and firesafe, crack-free permanent walls and ceilings are obtained through the use of Truscon Metal Lath.

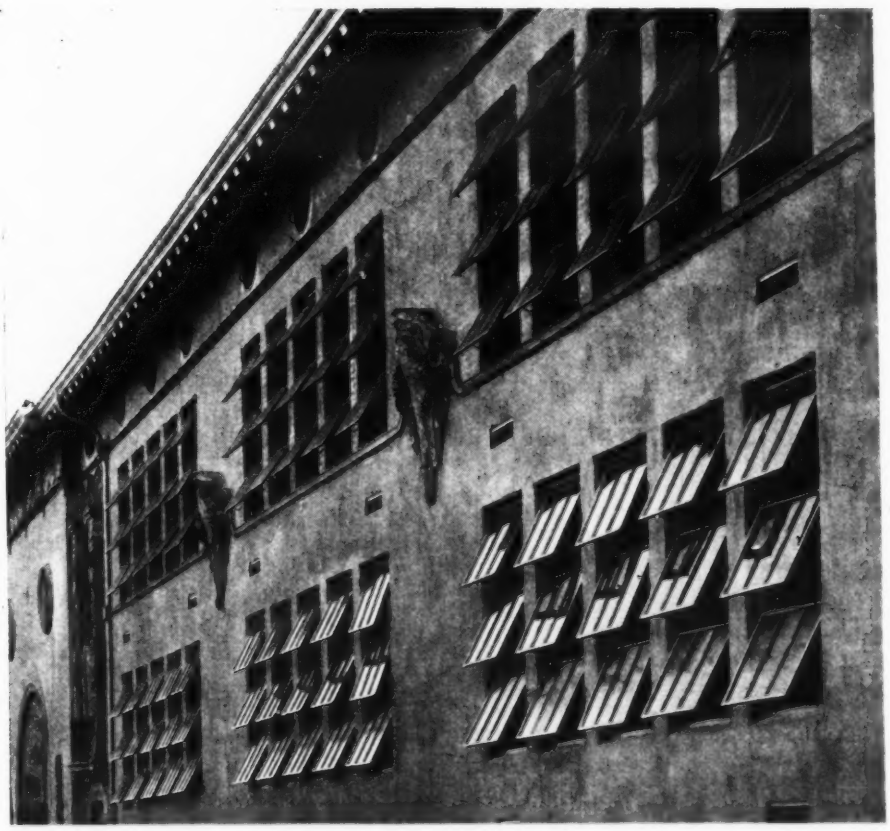
Ample daylighting and proper ventilation promote the health of school children. Truscon Windows for schools operate easily and are of finest quality. Types are available for every architectural requirement.

Protection against the fire menace must be provided in modern schools. Fireproof construction is assured with Truscon Steel Building Products, which include steel joists and reinforced concrete for floors, Steeldecks for roofs, metal lath for plastered walls and ceilings, metal door frame and trim for doors, and steel doors for furnace rooms, service entrances, etc.

The high quality of Truscon Products insures permanence and satisfaction. Their many distinctive features result in better construction at economical cost. The complete Truscon line includes products to meet every building condition.

Truscon Engineers will study your requirements and will make detailed recommendations without obligation. Write for catalogs and estimates.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO
Warehouses and Offices in Principal Cities
PACIFIC COAST PLANT—LOS ANGELES

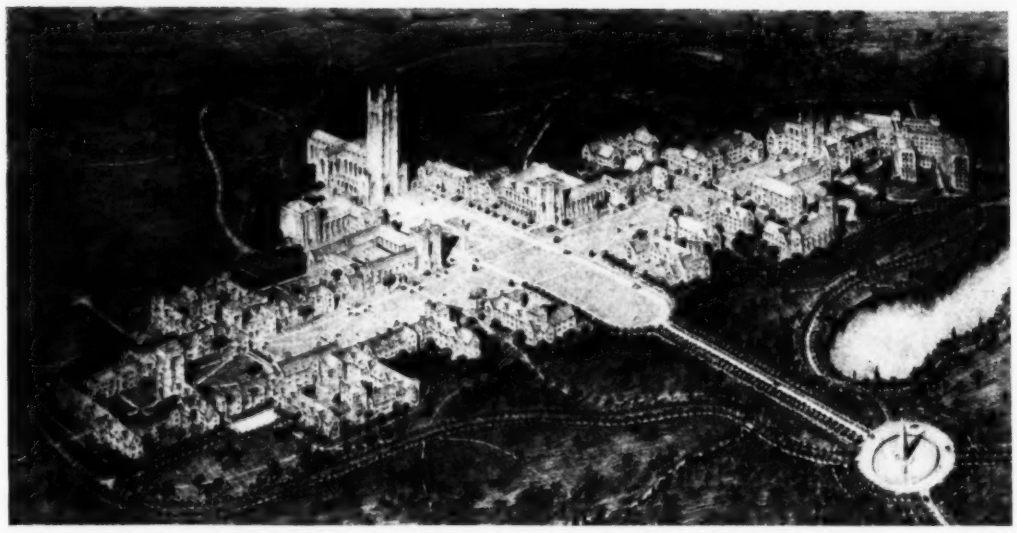


Truscon Donovan Awning Type Steel Windows provide diffused sunlight without glare and natural ventilation without drafts. Shades on sash act as awnings.

TRUSCON

STEEL WINDOWS - STEEL DOORS - STEEL JOISTS - METAL LATHS - STEELDECK ROOFS - REINFORCING STEEL

AT DUKE UNIVERSITY



A Complete New Plant—New Buildings, New Equipment. For their NEW Telephone System they chose North "All-Relay"

Duke University was building for TOMORROW. The newer and better types of equipment were selected. So an "All-Relay" Automatic Telephone System is serving the entire University plant.

North "All-Relay" Telephone equipment was adopted at Duke University after thorough investigation.

Scores of other Colleges and High Schools have investigated and adopted "All-Relay."

Harvard University has a SECOND installation in use—Conclusive proof of satisfaction with the first.

The Modern Trend is toward the newer, more efficient equipment; that is why "All-Relay" Telephone equipment is usually preferred to all others.

It combines ALL the valuable features of ANY automatic system with additional features and ADDED EFFICIENCY.

To this it adds entire freedom from routine maintenance expense.

Get all the facts about "All-Relay" equipment before you make a decision.

"ALL-RELAY"

COMPLETE YOUR SCHOOL BUILDING WITH

"ALL-RELAY" AUTOMATIC TELEPHONES

A postal brings bulletin 16

THE NORTH ELECTRIC MFG. CO.

ESTABLISHED 1884

GALION OHIO

SCHOOL LAW

TWO LEGAL DECISIONS ON PAYMENT OF TEACHERS' SALARIES

Two recent decisions of the California Appellate Court on the payment of teachers' salaries are of interest to school boards:

A decision in the case of Martin v. Fisher (63 Calif. App. Dec. 57), is to the effect that a teacher cannot recover any salary which may be due him, if the district had no available funds remaining at the close of the school year in which the salary accrued. The teacher in the case had been illegally dismissed by a school district from her position in 1925. In 1926 she was reinstated by the courts, and in 1928 commenced an action against the school district to recover her salary for the period between her dismissal and reinstatement. The rule is applicable to any situation where a teacher had a legitimate claim against a school district for salary due, since the existence of the claim is the prime factor which calls for the application of the rule.

The decision of the court means that, whenever a district has exhausted the funds of the district, a teacher cannot under any conditions, be paid any salary which may be then due him. A teacher in entering into a contract with the board of a school district, it was held, must assume the risk of losing part of his salary in case the district exhausts its available funds before completing the payments to the teacher.

In the case of Dupuy v. Board of Education (Calif. App. Dec. 659), the payment of a teacher's annual salary in twelve equal installments, as authorized by the school code, has been questioned by the Appellate Court. The court ruled that, while the law authorized the payment of teachers' salaries in twelve equal payments, the provisions of the law made it impossible to pay in twelve installments unless the teacher taught twelve months in the year.

In the decision, it is obvious that a teacher who serves for less then twelve months is serving for less than a full school year. Consequently, under the school-code provisions, no salary may be paid any teacher until the commencement of school. Thereafter, as the court held, the teacher at the end of each month, would receive such salary as might be due him for that month, plus a proportionate amount of each salary as may have become due him under his contract prior to the commencement of school. This ruling does not operate to deprive any teacher of his salary, but merely restricts the number of payments in which a teacher's salary may be paid.

SCHOOL LAW

School-District Government

School directors who failed to perform their statutory duties in the matter of entering into contracts were held subject to removal (24 PS § 180). — In re, Chester School District's Audit, 151 Atlantic reporter 801, 301, Pa. 203.

School trustees as a corporation bind themselves by contract only when acting officially, and when such official acts are evidenced by the board's record (Cahill's revised statutes of 1929, c. 122, pars. 33, 34). — Trustees of Schools, Township 24, Range 5, McLean County v. Martin, 255 Ill. App. 206.

The business of school trustees can be transacted only at regular or special meetings of the board. — Trustees of Schools, Township 24, Range 5, McLean County v. Martin, 255 Ill. App. 206.

No contract of the school trustees to pay fees to a former state's attorney for continuing to take charge of actions for school trustees could be implied from an oral request of the individual board members. — Trustees of Schools, Township 24, Range 5, McLean County v. Martin, 255 Ill. App. 206.

School directors seeking to escape a surcharge liability for unlawful expenditures by virtue of a subsequent statutory exemption are held to have the burden to prove facts entitling them to exemption (24 PS § 337). — In re, Chester School District's Audit, 151 Atlantic reporter 801, 301, Pa. 203.

The failure of school directors to record the votes in favor of a contract does not operate to continue a surcharge against the directors where under prior statute directors would be relieved (24 PS §§ 335, 337). — In re, Chester School District's Audit, 151 Atlantic reporter 801, 301, Pa. 203.

The fact that a school district may not have sustained any loss from illegal contracts of school directors, and from which the directors made no gain, would not relieve the directors from a surcharge liability (24 PS §§ 335, 337, 364, 482, 2213). — In re, Chester School District's Audit, 151 Atlantic reporter 801, 301, Pa. 203.

A rule that one who obtains goods without a contract must return them or pay the value was held inapplicable to relieve the school directors from a surcharge liability, resulting from illegal contracts (24 PS §§ 364, 482, 2213). — In re, Chester School District's Audit, 151 Atlantic reporter 801, 301, Pa. 203.

A school board could not accept the resignation of a school superintendent as of August 1 (Calif. political code, § 1609, subd. 3g, as amended by the statutes of 1927, p. 1913). — Aldrich v. Chino School Dist., 292 Pacific reporter, 271, Calif. App.

A school board could not arbitrarily change the date of resignation of the school superintendent from August 1 to June 30, without a notice to the superintendent (Calif. political code, § 1609, subd. 3g, as amended by the statutes of 1927, p. 1913). — Aldrich v. Chino School Dist., 292 Pacific reporter 271, Calif. App.

A statute regarding the resignation of a school employee should not be construed as fixing the date of the resignation by operation of the law, in the absence of an action by the school board (Calif. political code, § 1609, subd. 3g, as amended by the statutes of 1927, p. 1913). — Aldrich v. Chino School Dist., 292 Pacific reporter 271, Calif. App.

A finding in an action for the salary of a school superintendent was held to sustain the judgment for salary for July, 1928. — Aldrich v. Chino School Dist., 292 Pacific reporter 271, Calif. App.

A school superintendent could not recover his salary, in the absence of evidence that the district had available funds at the time the services were rendered, out of which the amount due could be

(Concluded on Page 82)

Acousti-Celotex installations can be inspected in these Michigan schools:

DETROIT
Holbrook School
Southeastern High School,
Roosevelt School
Dickinson School
Eastern High School
Longfellow School
Lapham School
Durfee School
Greenfield School
Gesu Parish School

FORDSON, MICHIGAN
Jonathan School
Woodworth School
Fordson High School
Freda Avenue School
Salina School
Elementary School

DEARBORN, MICHIGAN
Fred S. Maples School
Lowrey School

ROYAL OAK, MICHIGAN
Longfellow School, Addition No. 1
Longfellow School, Addition No. 2
Oak Ridge Public School
Royal Oak High School

TRENTON, MICHIGAN
Trenton High School

BIRMINGHAM, MICHIGAN
Quarton School
Barnum School

GROSSE POINTE, MICHIGAN
Grosse Pointe High School
Lochmoor School

WYANDOTTE, MICHIGAN
Washington School

Tear out this page and use it as a guide in visiting the above schools

When you are in Detroit, visit the Lapham School gymnasium (F. D. Madison, Detroit, Architect). Call out a few words and notice how quickly reverberation is stilled by the Acousti-Celotex ceilings.

"We'll see you . . . at booth 315"

BE SURE to visit booth No. 315 at the Superintendents' convention in Detroit this month.

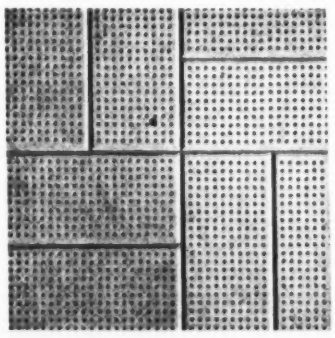
You'll find this booth an interesting spot, because it has to do with a vital school problem—the *control* of *noise*.

You'll learn more about that remarkable material called Acousti-Celotex. You'll discover why educators everywhere are turning to it as the solution to their noise problems.

Acousti-Celotex, when applied to ceilings, subdues distracting classroom noises. Absorbs the racket in the corridors, cafeterias, gymnasiums and manual training rooms. Quiets reverberation in music rooms and assembly halls. See this demonstrated by our sound cabinet.

To see Acousti-Celotex school installations at first hand we suggest that you visit some of the Detroit schools listed on this page. We suggest, too, that you lunch or dine at the General Motors or Fisher cafeterias . . . and note how the Acousti-Celotex ceilings subdue the din ordinarily found in cafeterias.

The Celotex Company, 919 North Michigan Ave., Chicago, Illinois. In Canada: Alexander Murray & Co., Ltd., Montreal. Sales distributors throughout the World. Acousti-Celotex is sold and installed by Acousti-Celotex contracting engineers.



Acousti-Celotex is unique among sound absorbing materials because it can be decorated with any kind of paint without loss of acoustical efficiency.

ACOUSTI-CELOTEX

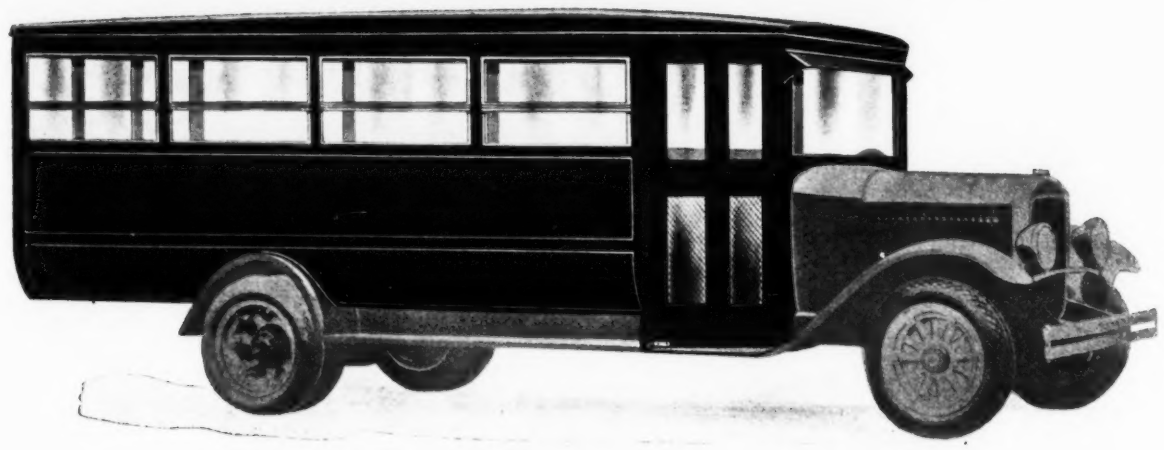
FOR LESS NOISE—BETTER HEARING

The words Celotex and Acousti-Celotex (Reg. U. S. Pat. Off.) are the trademarks of and indicate manufacture by The Celotex Company.

SAFETY - COMFORT - ECONOMY

YORK-HOOVER SCHOOL BUS BODIES

Built in Many Sizes With Different Seating Arrangements



Built for Any Make Chassis of Suitable Length and Capacity

MODEL 495B, A POPULAR MODEL AND A POPULAR SIZE.
THE SCHOOL BUS WITH THREE EXITS.

A New 28 Page Bulletin Now on the Press Will Give Valuable Information on the Subject of Transportation of School Children

Every School Board—Every School Superintendent—Should Have This Bulletin

YORK-HOOVER SCHOOL BUS BODIES ARE MERCHANDISED THROUGH A COMPETENT DISTRIBUTOR LOCATED IN IMPORTANT COMMERCIAL CENTERS.

York-Hoover Corp. Is the Largest and Oldest Firm in the United States With a Continuity in the Production of Commercial Motor Vehicle Bodies and Motor Busses.

YORK-HOOVER BODY CORPORATION - YORK, PA.

(Concluded from Page 80)

paid. — Aldrich v. Chino School Dist., 292 Pacific reporter 271, Calif. App.

Teachers

An agreement of two directors of a school district to employ a teacher was held not binding, where it was entered into informally, though with a third member's consent. — Shortal v. School Directors of Dist. No. 27, Jersey County, 255 Ill. App. 89.

A teacher's physical inability to commence services at the beginning of the school year and for five weeks thereafter were held such failure of performance as to release the school district. — Honk v. Independent School Dist. No. 245 of Polk County, 232 Northwestern reporter 329, Minn.

Pupils

The transportation of pupils is part of the educational system and is within the exclusive jurisdiction of the commissioner of education (N. Y. education law § 206, par. 18, as amended by the N. Y. laws of 1929, c. 256, and the laws of 1930, c. 104). — Rhynehart v. Spaulding, 244 N. Y. S. 569, 137 Miscellaneous reporter, 820, N. Y. Sup.

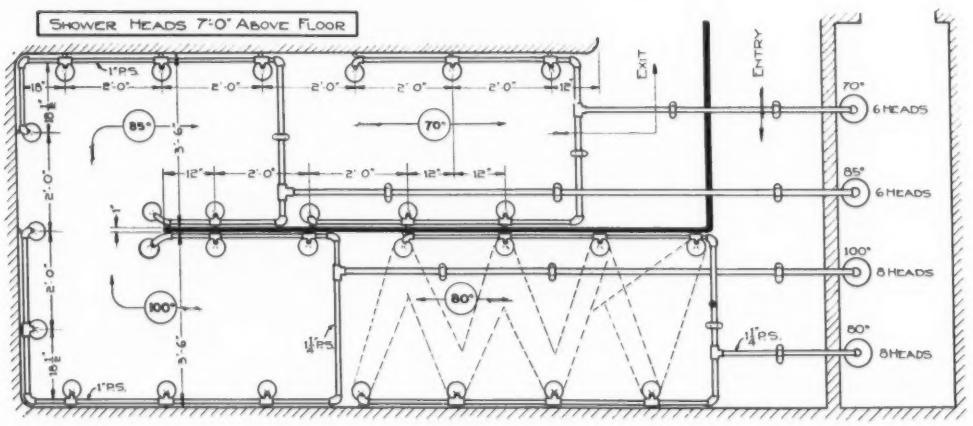
♦ The board of education of Racine, Wis., recently brought a suit to recover $40,000 from the city council, a sum which had accrued on school funds during the past six years. The case was decided against the board of education, the court holding that, "the law of 1927 provides for the deposit of the money 'belonging to the school district.' Does the money raised by taxation in the city of Racine for school purposes belong to the school district of the city of Racine? It certainly does not. All school property in the city of Racine belongs to the city in its corporate capacity as a city, although that property is held for purposes designated by law."

♦ The legislature of Wisconsin will consider a measure which aims to bring all the educational institutions of the state under the control of one board of education. The argument advanced is that duplication, waste, and lost motion is thus eliminated making the educational dollar go further. The centralization of authority will also, it is held, put an end to logrolling and lobbying with the legislature in the interest of one or the other educational institutions.

Economy and Efficiency in the Boys' Showers

The accompanying cut illustrates an interesting layout for a boys' shower room in high schools, balanced for economy both in space and in the use of water. The showers are arranged in four groups or wings with separate thermostatic controls which can be readily handled at one time by an attendant. The boys enter on one side and may bathe in water at 80 or 100 deg. They then pass to showers set at 85 deg., and before they leave must pass through water at 70 deg. The shower heads, which are of the self-cleaning type, are set 7 ft. above the floor for senior high schools and 5 ft. above the floor for elementary and junior high schools. The piping, which is of the exposed type in the accompanying plate, may be of the concealed type if so desired.

On an installation of this type it is desirable that the shower heads be equipped with a loose key or screw-driver-slot control permitting the attendant to regulate the volume of water discharged by each head. The self-cleaning type of shower head is also desirable so that the actual volume of hot and cold mixed water can be reduced to a minimum at the same time allowing for satisfactory showers.



LAYOUT FOR SHOWER ROOM AT THE RAUB AND MORTON SCHOOLS, ALLENTOWN, PENNSYLVANIA

Jacoby and Everett, Architects, Allentown, Pennsylvania

The arrangement here shown was designed by specialists in shower-bath equipments for the double purpose of (a) economy in space and operation, (b) the most healthful situation for bathing. The boys enter showers set at a comparatively moderate temperature and bathe in moderately hot water of 85 degrees or 100 degrees, and finally pass through cool water before leaving.

Speedy Communication Service — *An Essential of Modern School Operation*

Long experience in meeting school requirements has enabled us to develop specific types whose design is based on actual school operating conditions. School officials and school architects will find our representatives eager to assist in the planning of a suitable telephone layout for any school—present or prospective. Write or telephone our nearest sales office.

Large scale operation—the modern business principle—is being adapted to school systems with the greatest success. And in schools, as in business and industry, this necessitates adequate private telephone facilities, so that the functions of the various units of a school organization may be carried on smoothly, swiftly, without errors and without confusion.

Consideration of telephone equipment for schools should include a careful review of those features which have set Strowger P-A-X so far above the old-fashioned types of private telephone systems. These facts, for example, are worth studying:

1. Strowger P-A-X is completely automatic. It consumes neither the time of office personnel, which is expensive, nor that of pupils, whose proper place is in the classroom.

2. Strowger P-A-X is the product of forty years of experience in developing and manufacturing dial telephone equipment.

3. Strowger P-A-X is built of the same switches and telephones which are used by public telephone companies. The purchaser gets the benefit of quantity production, which means not only high quality, but also, quality considered, low cost.

4. Strowger P-A-X is carefully and sturdily made to meet the exacting requirements of the engineers of the largest telephone companies. It is built to stand up under the stress of constant service year after year.

These are only a few of the features which have led to the adoption of Strowger P-A-X in a large proportion of the more recent school projects, a list of which will be gladly furnished on request.

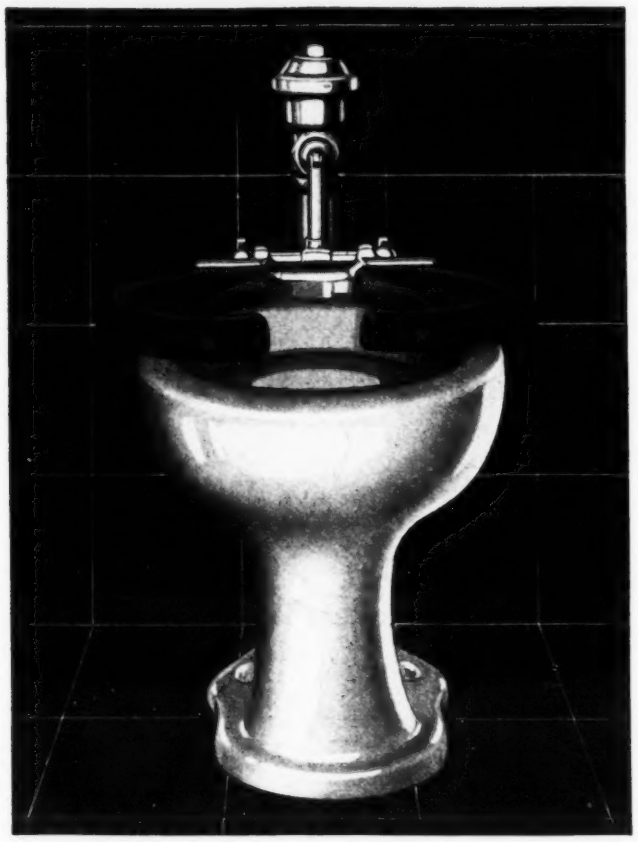
STROWGER AUTOMATIC DIAL SYSTEMS

Designed, Engineered and Manufactured By

Automatic Electric Inc.

Factory and General Offices
1033 W. Van Buren St., Chicago

Sale and Service Offices in Boston, Cleveland, Detroit, Kansas City, Los Angeles, New York, Philadelphia, St. Paul



The Royal Automatic seat-operating valve delivers a full, positive flush and not one drop more. With this valve no bowl stands unflushed, yet no water is wasted.

Superiority Proved in a Hard School

Convincing evidence of the reliability of Sloan Flush Valves is their widespread use in school buildings where, under extreme conditions of service, they have proved dependable, long-lived and efficient.

This is not surprising, however, when you consider that the Sloan Valve Company has been making flush valves—and flush valves only—for twenty-five years. Rigid adherence to the most exacting quality standards from the very first has brought undisputed leadership in the flush valve field—with Sloan Valves outselling all others combined.

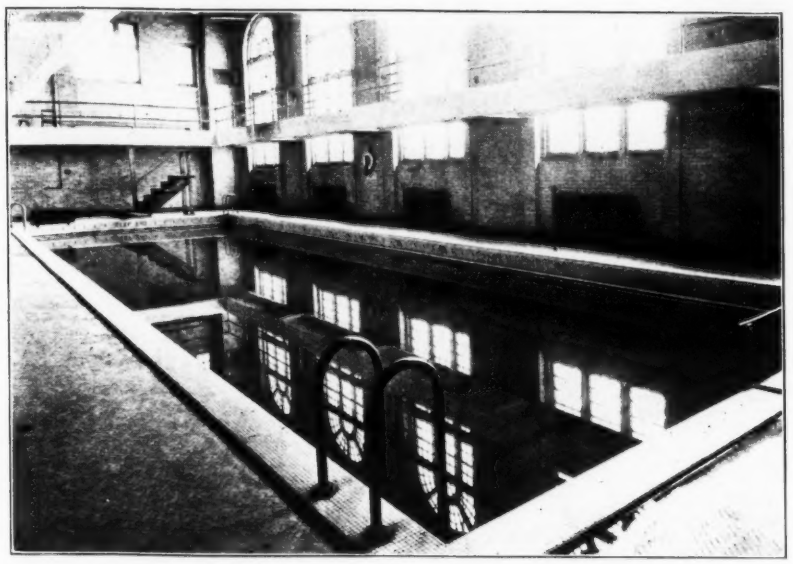
The Sloan line includes hand-operated and automatic seat-operated flush valves, either exposed or concealed. Thus every school requirement is provided for—including floor or wall-outlet closets, urinals and slop sinks. Where maximum water savings are a requisite, valves with a measured flush are available for cold water showers and lavatories.

During 1930 more than 500 of the principal school buildings erected were equipped with Sloan Valves. Inspect any of these installations. It is to your advantage from the standpoint of economy as well as public health.

The experience of Sloan engineers will help you to choose the valve that fits your needs. Offices in all principal cities make this service readily available.

SLOAN VALVE CO • CHICAGO

MEET DETROIT STANDARDS for SWIMMING POOLS



A W&T Type MSPM Chlorinator sterilizes this school pool.

SCHOOL pools in Detroit are on the *Honor Roll* of swimming pool sanitation.

To consistently keep this pace they rely on accurate, dependable chlorination at all times—the kind of service W&T chlorinators give them. Chlorine does its work thoroughly—sterilizes every point in the pool.

Where you find the highest scores—look for W&T equipment.

WALLACE & TIERNAN CO., INC.,
NEWARK, N. J.
Branches in Principal Cities

A PRODUCT OF
WALLACE & TIERNAN

Swim in *Drinking Water*

SP-11a

High-School Auditorium Use by Outsiders

South St. Paul Adopts Superintendent's Program

South St. Paul, Minn., recently completed a splendid high-school auditorium. The seating capacity is 1,200. Though every tendency toward gaudy or elaborate appearance has been purposely avoided, the entire building appeals because of its simple and quiet beauty. It has a well-equipped and beautiful stage that, by means of folding doors and curtaining, may be made an integral part of the auditorium and used independently with the auditorium, or it may be made an integral part of the gymnasium which is back of the stage. Finally, it may be used to connect up the two.

The whole project has been planned to meet not only school needs, but also the general community needs in the auditorium field, as well as certain special community needs peculiar to the particular locality which happens to be one of the great meat-packing centers of the United States.

Prior to putting the auditorium into practical use, considerable study was given to the question of the determination of the right policy governing its use. This study is summarized below from the superintendent's monthly report to his board of education. It was adopted as presented and is offered as a guide to those who may be working with the problem of determination of policy with reference to school-auditorium use by outsiders. Mr. Irwin T. Simley, superintendent, wrote:

Introduction

The auditorium which we are about to move into, is more than a large room with seats and stage. It is a *real auditorium*. You will wish it to be used and operated accordingly. And that is undoubtedly the first principle on which you will wish to build the rules and regulations governing its use.

Our auditorium belongs to the people of South St. Paul. As the board in charge, it will be your responsibility to see that the people's interests in it are properly safeguarded. This can be brought about by a full and proper use of the auditorium for the *general good* and by conscientious and effective care of the property in and out of use.

There will be those individuals and groups or private organizations that will argue that, since the auditorium belongs to the public, the auditorium together with all its facilities, personal and material, should be made available to him or them without charge. If such individual, or group of individuals, or private organization, *do* represent the *general* public, well and good. You can accord him or them privileges accordingly. If, on the other hand, the use of the auditorium shall contribute, directly or indirectly, to *individual* gain, financial or otherwise, the thing for us to consider is the *public* and *general* rights or good. In other words, when the privilege or benefits of use extend to the entire public, and equally to all, it seems to me the board should say: "Certainly! It is yours! Use it to your hearts' content! We shall order our administrative and operative personnel to 'run' it for you." On the other hand, when the privilege and benefits of use do not extend to the general public but to some small part thereof, it seems to me the board should say, provided of course such use meets with the approval of the board: "Certainly! Use it — but in terms of the public's rights! Since the public paid for it, the public must be reimbursed when it is used for private gain whether that gain be financial or otherwise. In other words, you must pay the reasonable rental fee that the board has determined upon."

In determining the proper rental fee, it must be remembered that this auditorium is not going to operate itself. Neither can it be operated by "Tom, Dick, or Harry." The stage equipment, including lighting and scenery, must be touched by no one except those trained to do it. The ushering must be done by trained ushers or at least supervised by someone who knows the seating. General supervision of conduct must be done by someone *with authority*. Reserved seating, when desired, must be according to stock plan. In other words, there is considerable service, aside from heat, light, ventilation, and janitorial service, that necessarily must go with any use of the auditorium. *When used by private parties, these services should be paid for by such private parties.*

My suggestions are incorporated under the proper heading in the rules and regulations below:

In the rules I have incorporated a requirement for two free tickets for each of our seven board members and our two officers. With all the gratis service our board members and officers render our community, this courtesy is the least that can be done to show appreciation. I have purposely omitted the superintendent. He is paid for what he does.

Rules and Regulations

I. *Auditorium Use Must Include Auditorium Personnel.*

The auditorium must at all times be used under the management personnel maintained by the board of education. This shall include:

1. Operator of stage scenery and lighting.

a) Under no circumstances shall anyone operate either stage scenery or stage lighting, except as duly authorized by the proper school authorities.

b) Property managers to move and arrange stage furniture under the school stage manager shall be furnished by the organization using the stage.

2. Head usher and such helpers as may be necessary.

a) Private organizations may furnish ushers to work under the school head usher and such assistants as he may need.

3. Firemen, engineers, janitors as needed.

4. Custodian who shall have authority and be charged with the responsibility of enforcing board regulations.

II. *Application and Permit.*

1. Application for the use of the auditorium shall be filed with the superintendent of schools, or with such agent as he shall have appointed, with the approval of the board. The superintendent shall not be authorized to make any exception to the rules and regulations adopted with reference to the auditorium by the board. Application for free

HUNDREDS OF FEET TREAD THESE FLOORS EACH DAY

FROM HUNTINGTON LABORATORIES

Yet, they always look bright and new

TREAT your floors with **Liqua-Shine,** the complete wax and floor finish for **Linoleum, Hardwood, Maple, Pine, Cork Carpet, Magnesite** and **Lino-Tile,** and as they are used, the floors become more beautiful, as *passing feet polish the wax to a higher luster instead of scratching and marring the floors themselves.* The wax takes the wear and tear and *preserves your costly floors* in all their original beauty. It is easily applied. *Write for further information and a demonstration.*

See our exhibit* BOOTH No. 344 *Drill Hall, Convention of the Department of Superintendence, N. E. A., Detroit, February 21-26.

THE HUNTINGTON LABORATORIES, Inc.
Huntington, Indiana

Canadian Office and Warehouse, 36 Yonge Street, Toronto, Ontario.

LIQUA-SHINE
THE COMPLETE WAX AND FLOOR FINISH

use, except when such use is by and for regular school organizations, shall be made directly to the board of education, or be presented to the board by the superintendent.

2. The permit to use the auditorium must be made in writing on a form setting forth the conditions under which it may be used as well as the rules and regulations governing its use.

III. *Schedule of Prices.*

1. If regular admission is charged, the proceeds of which are not to be used for school purposes, the charge shall be:

a) For evening use.....$50
b) For afternoon use..... 25
c) For evening rehearsal..... 10 extra
d) For day rehearsal..... 5 extra

2. If no regular admission is charged but a collection is taken which is not to be used for school purposes:

a) For evening use.....$25
b) For day use..... 10
c) For rehearsals.....same as above

3. If no admission whatsoever is charged:

a) For evening use.....$15
b) For day use..... 5

IV. *Tobacco and Intoxicating Liquors Prohibited*

The use of tobacco or intoxicating liquors in the auditorium shall be strictly prohibited.

V. *Complimentary Tickets.*

For any performance each school-board member and each school-board clerk and the treasurer, shall be entitled to two complimentary tickets to be furnished by any organization renting the auditorium.

VI. *Pay for Auditorium Help.*

1. School organizations using the auditorium shall, through the high-school principal, furnish and pay for such help as is needed and provided in these rules and regulations.

2. Parties renting the auditorium shall have such help furnished and included in the rental fee. Such help shall be then paid by the board of education as certified by the superintendent of schools in his monthly payroll. The schedule of pay shall be as follows:

a) Ushers — Free admission furnished by rentee.
b) Stage Manager — Fifty cents an hour except when used during regular hours.
c) Custodian — Fifty cents an hour except when used during regular school hours.

VII. *Tickets.*

1. A stock block of reserved tickets may be purchased from the board of education through the superintendent's office, or his authorized agent, at $10.

2. Reservations shall be made according to the buyer's own plan and at his own expense.

THE DETROIT CONVENTION

(Concluded from Page 59)

Radio Program

Columbia Broadcasting Program — Monday, February 23, 8:30–9:00 p. m., eastern standard time. Presiding, Norman R. Crozier, President, Department of Superintendence, National Education Association.

1. Program announcer.
2. President Crozier, introducing musical numbers by Detroit schools.
3. Music — Detroit schools.
4. Presentation of tributes to Admiral Byrd from American School Children, President Crozier.
5. *Byrd, The Explorer and Man,* Gilbert Grosvenor, president, National Geographic Society.
6. *Conquering the Antarctic By Air,* Rear-Admiral Richard E. Byrd.
7. Complimentary close, S. D. Shankland, executive secretary of the Department of Superintendence.

Wednesday, February 25

Presiding, Norman R. Crozier, President, Department of Superintendence, National Education Association.

1. *The Schools and Business,* William J. Bogan, superintendent of schools, Chicago, Ill.
2. Music — Detroit schools.
3. Address, H. E. Barnard, director White House Conference on Child Health, Washington, D. C.
4. *The Schools and the Economic Depression,* William C. Bagley, Columbia University, New York, N. Y.
5. Music — Detroit schools.

CREATIVE EXPRESSION

The most important value in creative expression is the satisfaction which it gives the individual. Creative expression is encouraged by sympathetic appreciation of what the child has expressed. The unimaginative and traditional attitude of the adult often prevents him from having an understanding of the real art quality of children's work. If one will try to see the sincerity, richness of idea, and unusual composition in children's painting, he will increase his respect for the art ability of children. While physical activity and the approval of other are enjoyable factors in creative work they are not comparable to the satisfaction which the child finds in seeing his own ideas take form.

— Margaret E. Mathias

PERSONAL NEWS

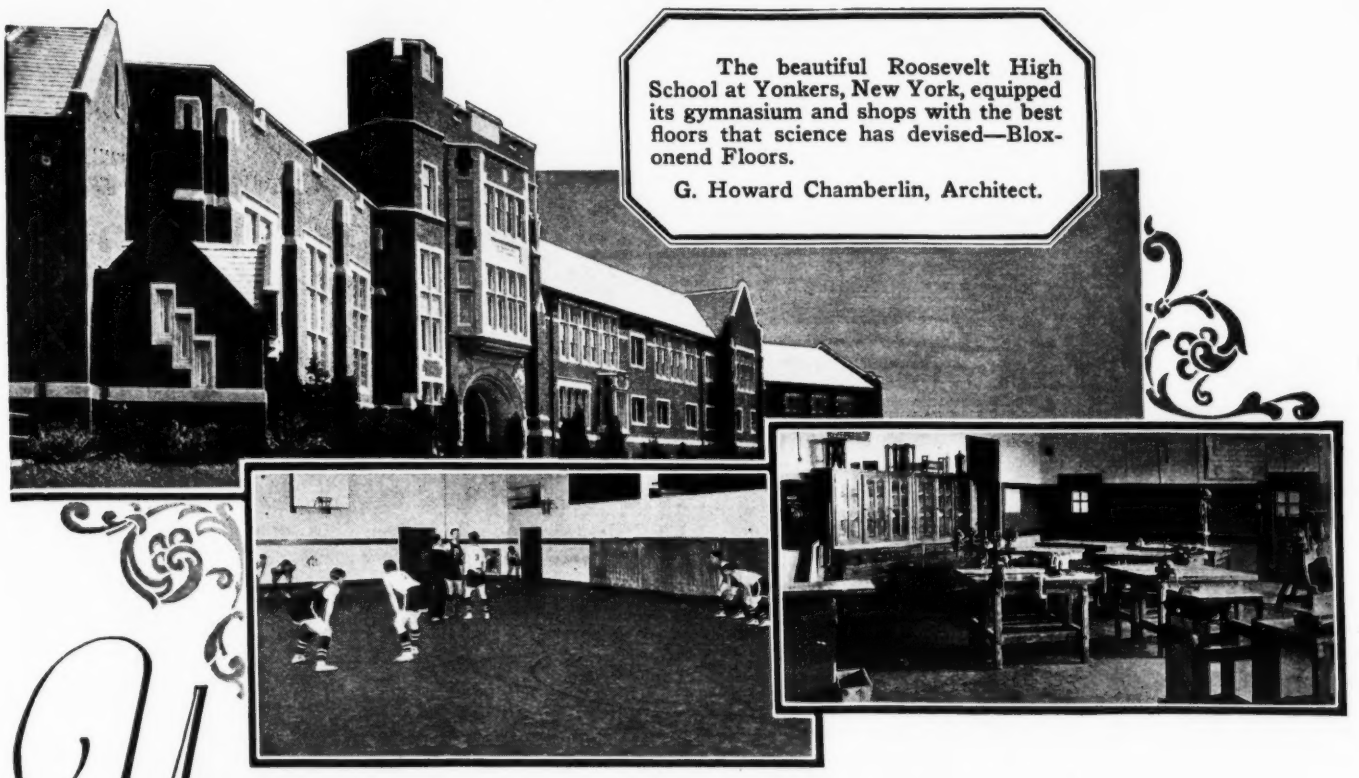
♦ The board of education of San Francisco, Calif., recently reëlected Dr. J. M. Gwinn as superintendent of schools for a period of four years. The appointment becomes effective in June, 1931, when Superintendent Gwinn will complete his eighth year of service in the schools.

♦ The school board of San Francisco, Calif., has reorganized for the year 1931, with the reëlection of Mr. Ira W. Coburn as president, and Mrs. E. J. Mott as vice-president.

♦ The school board of Van Wert, Ohio, has reorganized with the reëlection of Mr. F. W. Fraylick as president, Mr. M. W. Feigert as vice-president, and Mr. F. P. Clark as clerk.

♦ The school board of Elyria, Ohio, has reorganized, with the reëlection of Dr. A. R. Agate as president, Mr. E. J. Howenstine as vice-president, and Mr. S. S. Rockwood as clerk.

♦ The school board of Fostoria, Ohio, has reorganized, with the reëlection of Dr. J. L. Carter as president, Mr. T. M. Segner as vice-president, and Mr. W. J. Daub as clerk-treasurer.



The beautiful Roosevelt High School at Yonkers, New York, equipped its gymnasium and shops with the best floors that science has devised—Bloxonend Floors.

G. Howard Chamberlin, Architect.

YONKERS *selects the perfect floor—*

BLOX-ON-END

IN THE gymnasium a Bloxonend Floor is fast, sure and absolutely splinterless; the end-grain fibres form the surface of the floor. A positive foot-hold is assured for routine training or athletic contests. Powdered boric acid (easily removed with a damp cloth) makes it just right for dancing. It is durable and attractive, and easy to keep clean.

A Bloxonend Floor stands up under the roughest usage that school shops can give. It is comfortable and safe under foot and can never splinter. It remains smooth always because the entire surface is formed into a wear-resisting unit.

Write for your copy of special booklet "School Floors."

A WELCOME AWAITS YOU AT OUR BOOTH No. 343—DRILL HALL, N.E.A. CONVENTION DETROIT MASONIC TEMPLE.

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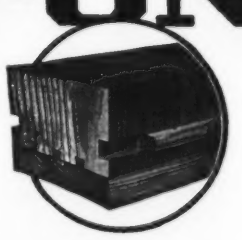

Bloxonend is made of Southern Pine with the tough end grain up. It comes in 8 ft. lengths with the blocks dovetailed endwise onto baseboards

Lay's Smooth Stay's Smooth

CORBIN

Letter Boxes for Schools Key and Combination

No. 85
Size 3⅞x5 inches

No. 1702A
Size 5½x6¼ inches

No. 85 Combination Letter Box Made in 3 Sizes

Cast Bronze, regularly finished medium statuary. Dials etched, figures raised on black background. Combinations all different.

No. 1702A Key Letter Box
Cast Bronze, medium statuary finish. Pin tumbler lock. 3 keys with each letter box. Key changes practically unlimited.

Special finishes where required. All boxes furnished with pigeon holes of various depth.

Send for Catalogue No. 57 showing additional styles and sizes.

Manufacturers of letter boxes for 50 years.

Announcing a New Corbin Combination Padlock With Exclusive Features for Lockers and Gymnasium Wire Suit Baskets

The cost of installing Corbin Combination Padlocks for your lockers and gymnasium wire suit baskets is small in contrast to the protection they provide.

A unique Corbin feature in the Padlock is that it cannot be left unlocked when the shackle is closed.

When the lock is opened it retains its combination and when locked automatically throws off the combination, thus eliminating the necessity of manipulating the dial, which is necessary on ordinary combination padlocks to insure closing.

Unpickable, easy to operate, absolute security and rust proof.

Made from all brass material. Etched dial with white figures on black background.

No two combinations alike, with practically an unlimited number of changes.

This padlock is also made in steel, black japanned with hardened steel, cadmium plated shackle.

No. 09920
Illustration ¾ size

Insist on Corbin Combination Padlocks on your new equipment and have them installed on your present lockers and gymnasium wire suit baskets.

A sample lock will be sent gratis upon request for inspection.

CORBIN CABINET LOCK COMPANY

The American Hardware Corporation, Successors

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PERSONAL NEWS OF SCHOOL OFFICIALS

NEWS OF SCHOOL OFFICIALS

♦ When JOSEPH C. MCKEREHAN was elected president of the Altoona, Pa., school board he announced that under no circumstances would he serve longer than one year. He believes that the honor of being president should be passed around.

♦ DR. EDWARD G. RANDALL has completed 25 years of service as a member of the board of education of Waterville, N. Y.

♦ RAYMOND S. JEWETT was reëlected president of the Associated School Boards and Trustees of New York State. Other officers of the association are: vice-presidents, GEORGE R. STEPHENS, Lancaster; HARRY J. CLARK, Syracuse; GUY W. CHENEY, Corning; WILLIAM F. SEBER, Troy, JAMES H. ANDERSON, New Rochelle; ALEXANDER J. WALL, Lynbrook; treasurer, DR. FRANK QUACKENBUSH, Northport; executive committee: MRS. E. L. ROBERTSON, Syracuse; EDWARD VILLARS, Carthage; MRS. HENRY G. DANFORTH, Rochester; DR. LOUIS D. HYDE, Owego; MRS. CHARLES O. JUDKINS, Glens Falls; HARRY S. RIVENBURGH, Hudson.

♦ MR. THOMAS BRAND, JR., is a new member of the school board at Coraopolis, Pa. Mr. Brand succeeds the late J. L. Klindworth, who died during the past year, after completing six years as a board member. Mr. Klindworth was vice-president of the board for two years, and was chairman of the building committee at the time of his death.

♦ The school board of Painesville, Ohio, has reorganized, with the reëlection of MR. C. S. FULLERTON as president, MR. E. J. KEENER as vice-president, and MR. EARL TUCKER as clerk.

♦ DR. C. R. KNOBLE has been reëlected president, and DR. PARKER vice-president, of the school board of Sandusky, Ohio.

♦ DR. D. S. FINTON has been reëlected president of the school board of Findlay, Ohio. MR. F. J. ELSEA was named as vice-president, and MR. L. L. PORTER as clerk.

♦ MISS LILLIAN ARMSTRONG has been reëlected president, and MR. A. D. BUBB vice-president, of the school board of St. Marys, Ohio.

♦ MR. KARL K. LORENZ has been reëlected for another year as president of the school board of Dayton, Ohio. MR. HORACE STEPHENSON was elected vice-president.

♦ The school board of Van Wert, Ohio, has reorganized, with the reëlection of MR. FLOYD W. FRAYLICK as president, MR. M. W. FEIGERT as vice-president, and MR. F. P. CLARK as clerk-treasurer.

♦ ALEXANDER MCBANE, 83, who was for thirty years head of the attendance department of the Cleveland, Ohio, schools, died on January 2, at the St. Lexis' Hospital, from injuries received in a traffic accident. Mr. McBane began his career as a teacher. In 1892 he was appointed as first attendance officer in the Cleveland schools. He served as head of the department until eight years ago, when he relinquished his position in favor of a younger man. He had retained his connections with the department.

♦ MR. HARRY G. MASON has been elected as clerk of the school board at Lima, Ohio.

♦ MISS E. V. MCLOUGHLIN has been elected as secretary of the school board of North Providence, R. I., to succeed Mrs. Helen G. Boyce, who retired on December 31.

♦ MR. WILLIAM BROGUNIER has been reëmployed as superintendent of buildings and grounds for the schools of Rockford, Ill. Mr. Brogunier has held the position for the past twelve years. MR. ROY BROWN has been reëmployed as attorney for the board of education.

♦ DR. T. P. SULLIVAN has been reëlected chairman of the school board at Fall River, Mass.

♦ MR. CORNELIUS F. MURPHY has been elected a member of the school board of Newport, R. I., succeeding Judge Walter Curry. MR. W. R. HARVEY was reëlected as chairman, and MR. L. K. CARR as vice-president of the board.

♦ The school board of Pawtucket, R. I., has reorganized with the reëlection of MR. W. D. STRACHAN as chairman, MRS. MYRA B. MORSE as deputy chairman, and MISS BESSIE P. HAWKINS as secretary of the board.

♦ The school board of Quincy, Mass., has reorganized, with the election of DR. N. S. HUNTING as vice-chairman, MR. JAMES N. MUIR as secretary, and MISS MARION NILSON clerk.

♦ DR. JOHN H. BRISTOR, clerk of the board of education at Mansfield, Ohio, has been reëlected for his 23rd year.

♦ The school board of Urbana, Ohio, has reorganized, with the reëlection of MR. W. R. WILSON as president, MR. J. C. NEER as vice-president, and MR. F. F. PAULIG as secretary.

♦ The school board of Bedford, Ohio, has reorganized, with the reëlection of DR. W. C. WARREN as president, MR. W. R. HECK as vice-president, and MR. R. P. ORCHARD as clerk.

♦ The school board of Garfield Heights, Ohio, has reorganized, with the reëlection of MRS. CARRIE EATON as president, MR. E. F. BORGES as vice-president, and MR. H. L. MOCK as clerk.

♦ The school board of Conneaut, Ohio, has reorganized, with the reëlection of MISS LOUISE KAHLER as president, and MR. CHARLES OTT as vice-president.

♦ MRS. HOMER PRICE has been reëlected as president of the school board of Granville, Ohio. DR. R. H. WILLIAMS was elected vice-president, and ALBERT GUCKERT clerk.

♦ The school board of Defiance, Ohio, has reorganized, with the election of MR. F. A. BOKOP as president, MR. E. G. KING as vice-president, and MR. A. H. LATCHAW as clerk.

♦ MR. WILLIAM A. STROHM has been appointed a member of the school board of Anne Arundel county, at Annapolis, Md., succeeding Mr. R. P. Melvin.

♦ W. J. SHRODER was reëlected president of the Cincinnati board of education. He is serving his

(Continued on Page 90)

WALLACE
WOODWORKING MACHINES

It is significant that more and more schools are installing Wallace Portable Machines. In 1930 more Wallace Machines were sold to schools than any other year in our history.

This proves that school boards and instructors have accepted the Wallace Idea of using portable, high speed, direct drive, easily operated, safe machines. Wallace Machines ideally fit school needs and school appropriations. Money goes a long way when you figure on the right equipment for school purposes. For example, $1500 will pay for Wallace Machines to fully equip a twenty student shop. The coupon below will bring you a flexible shop layout plan, and a lot of worthwhile information without obligation.

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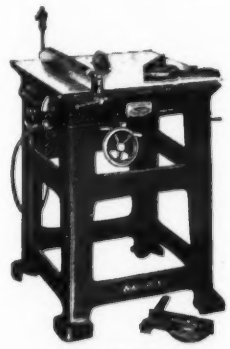
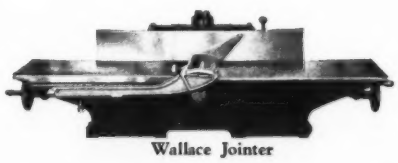

Wallace Circular Saw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Detroit · Feb. 21-26

Robert B. Eastty in attendance

KENNEDY & DAWSON—Detroit Representatives
2111 Woodward Avenue

American Abrasive Metals Co.
50 Church St. **New York**

(Continued from Page 88)

sixth term. MRS. L. C. FILLMORE was reëlected vice-president. ROBERT W. SHAFER was again chosen clerk of the board.

♦ The school board of Canal Winchester, Ohio, has reorganized, with the reëlection of DR. J. P. WARNER as president, MRS. MATTIE C. GAYMAN as vice-president, and MR. B. L. STRADLEY as clerk.

♦ The school board of Bexley, Ohio, has reorganized, with the reëlection of MR. F. A. LICHTENBERG as president, DR. K. G. BUSCH as vice-president, and J. L. W. HENNEY as clerk-treasurer.

♦ The school board of Eaton, Ohio, has reorganized, with the reëlection of MR. D. N. DUKE as president, MR. J. A. LANDIS as vice-president, and MR. H. W. FULTON as clerk.

♦ The school board of Miamisburg, Ohio, has reorganized, with the reëlection of MR. W. H. KUHN as president, MR. H. R. GEBHART as vice-president, and F. E. TREON as clerk-treasurer.

♦ The school board of Dover, Ohio, has reorganized, with the reëlection of MR. E. F. WIBLE as president, MR. R. H. WILLIAMSON as vice-president, and MR. AARON WENGER as clerk.

♦ The school board of Hamilton, Ohio, has reorganized, with the reëlection of MR. E. B. HUGHES as president, MR. C. M. EIKENBERRY as vice-president, and MR. CHARLES HOLDEFER as clerk-treasurer.

♦ The New Lexington, Ohio, school board has reorganized, with the reëlection of MR. JOHN EVANS as president, MR. W. E. PLETCHER as vice-president, and MR. C. R. RIDENOUR as clerk.

♦ The McConnelsville, Ohio, school board has reorganized, with the reëlection of MRS. JENNIE DONAHUE as president, and MR. FRANK HEIL as secretary.

♦ The Girard, Ohio, school board has reëlected MR. E. R. WILLIAMS as president, DR. H. L. WILLIAMS as vice-president, and MR. GEORGE BARTHOLOMEW as clerk.

♦ The Wellston, Ohio, school board has reorganized with the reëlection of MR. E. H. WILLIS as president, MR. CLYDE SCOTT as vice-president, and MRS. NEVA SCARBERRY as clerk.

♦ MR. W. H. KIRKPATRICK has been reëlected clerk of the school board of Bridgeport, Ohio, for a fifth term. DR. J. O. HOWELLS was reëlected president, and PAUL MILLER vice-president.

♦ MR. F. A. MUSSER has been elected president of the school board of Wellsville, Ohio. MR. W. R. MACDONALD was elected vice-president, and MR. C. A. MCLAUGHLIN clerk.

♦ MR. W. M. MAUK has been reëlected president of the school board of New Philadelphia, Ohio, for an eleventh term. MRS. C. E. WEBER was elected secretary, and MRS. I. I. MCGONIGAL vice-president.

NEWS OF SUPERINTENDENTS

♦ MR. HENRY H. HILL has become superintendent of schools at Lexington, Ky., succeeding the late Guy Whitehead.

♦ MR. HAROLD W. THOMAS, of Johnson, Vt., has been elected superintendent of schools at Simsbury, Conn. Mr. Thomas succeeds P. D. Collier, who resigned to become supervisor of secondary education in Connecticut.

♦ DR. WALTER WILLIAMS has been appointed president of the University of Missouri, succeeding Dr. Stratton D. Brooks.

♦ MR. D. S. WILLIAMS, superintendent of schools of Bozeman, Mont., has become president of the Montana Society for the Study of Education.

♦ MISS LULU PICKETT, of Superior, Wis., recently forestalled a strike of high-school students by a plea that they remain in their classes. Installed as superintendent in 1926, after a student strike aided dismissal of her predecessor, Miss Pickett last year was retained by a 5-to-3 vote of the school board. The new board had voted to ask for her resignation. She was reported as refusing to comply with the demand and the students planned to strike in sympathy.

♦ MR. HAROLD F. DOW, of Swampscott, Mass., has been elected superintendent of schools at Danbury, Conn. The election ends a controversy which has been going on for over a year. The school board became deadlocked over a new superintendent, and the members have been taking turns in the conduct of the schools.

♦ The northeast division of the Minnesota Council of School Executives, at a regular meeting held on December 23, expressed to Mr. C. H. Barnes, retiring superintendent of schools of St. Louis county, their deep appreciation of his work as an educator, an organizer, and an administrator in the schools of Minnesota. Attention was particularly called to the fact that he had performed with honor to himself and the educational service of Minnesota leadership in the positions of classroom teacher, city superintendent, member of the state education department, president of the Minnesota Education Association, and superintendent of the county schools of St. Louis county. It was his special privilege to reconstruct the one-room rural school into a fine system of graded and high schools. He encouraged in every way the development of the school as a community center for the wholesome growth of social relationships.

♦ MR. CHARLES H. MORSE, formerly superintendent of schools at Lincoln, Mass., died recently at Needham, at the age of 73.

♦ SUPT. A. L. DAY has been reëlected as head of the schools of Commerce, Tex.

♦ HARRIS HART, state superintendent of public instruction of Virginia, resigned on January 1. DR. J. L. JARMAN, of the State Teachers' College was appointed to succeed Mr. Hart.

♦ MR. ROBERT ROSS, for four years principal of the high school at Monticello, Ind., has recently been appointed superintendent of schools, to succeed H. E. Elder, who has resigned.

♦ MR. C. H. BARNES, formerly superintendent of schools of St. Louis county, Minn., has accepted an executive position with the Minneapolis School Supply Company. He is now vice-president of the firm.

The firm with which Mr. Barnes is connected is known throughout the northwest and is one of the firms controlled by the Hale-Haas Corporation of Eau Claire, Wis. Before becoming county superintendent, Mr. Barnes was superintendent of schools in Ely, Eveleth, and St. Cloud, and was connected with the state department of education.

♦ MR. MILTON C. POTTER was, on January 13, reëlected as superintendent of schools at Milwaukee, Wis., for a three-year term. Mr. Potter has

(Concluded on Page 92)

Right — Car-Na-Var (companion treatment to Rubber-Var) gives mirror-like finish to linoleum floors of Indianapolis Public Library.

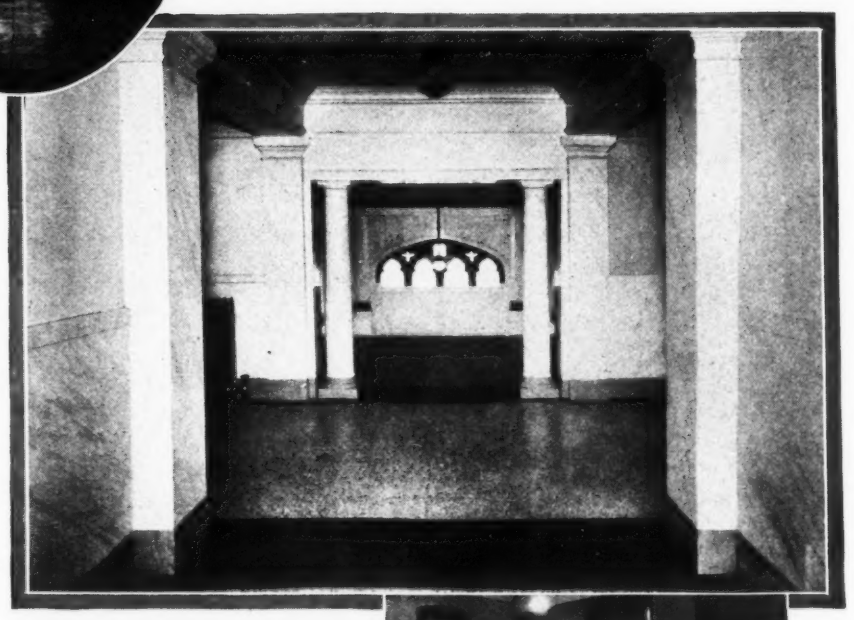
Porous, pitted terrazzo floors tightly sealed against dirt with Rubber-Var

With scrubbing no longer necessary Frisco Employees' Hospital of St. Louis, Missouri, greatly reduces floor maintenance costs.

"Two years ago," says Mr. Robert A. Sack, Superintendent, "before using Rubber-Var, we scrubbed our terrazzo floors with cleaning powder, brushes and mops as often as was necessary. But the porous floors, with their small 'pit marks', enabled dirt to become imbedded and made it impossible to keep the floors thoroughly clean. Rubber-Var has entirely overcome this condition by sealing the floor so dirt cannot find a hiding place."

- Rubber-Var is a scientific combination of varnish gum and waxes. It gives a beautiful, lustrous, yet non-slippery finish to rubber, soft composition and light colored terrazzo floors . . . protects the surface indefinitely from wear . . . cuts maintenance costs as much as 50%. Easily applied with a mop.

- Car-Na-Var is a special treatment for wood, linoleum, mastic, concrete and cork floors. Gives same desirable results as Rubber-Var.



Above—Rubber-Var has entirely eliminated the necessity for scrubbing terrazzo floors in the Frisco Employees' Hospital, St. Louis, Mo. Floor maintenance costs are thereby greatly reduced.

Right—75-year old wood floors at Elmira College, N. Y., preserved and beautified with Car-Na-Var.

Below—Thousands of grinding feet cannot harm rubber floors in this Washington, D. C., Building (H. B. Hibbs & Co.) since protected with Rubber-Var.

Every person interested in the efficient and economical maintenance of floors should have a copy of "Floor Research". Written by a nationally known floor consultant. Send coupon for free copy.

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FOR TREATING RUBBER FLOORS

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Without obligation send me FREE copy of "Floor Research." Also send me further details about Car-Na-Var and Rubber-Var and your FREE TEST OFFER.

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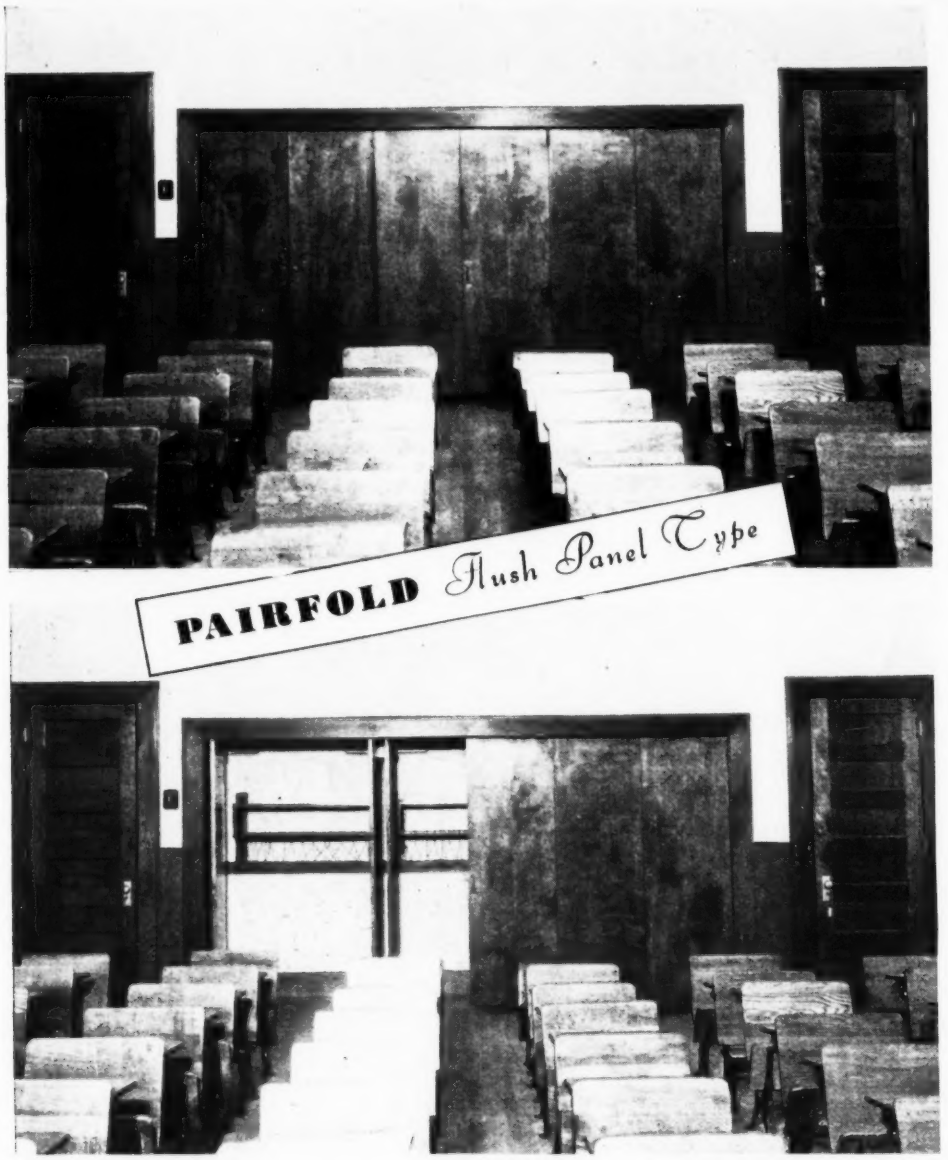

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The steady and hard use to which school wardrobes are put—makes it poor economy to install any but the most intelligently designed and most carefully constructed. An absence of high repair costs and an absence of that "battered" appearance after many years of use are found in Circle A School Wardrobes.

Available in Pair—or Group—operation, with panelled, cork or blackboard surfaces. Equipped with high efficiency ventilating system and ball bearing hardware that gives finger-tip operation. Write today for new book of facts on these space-saving, confusion-saving school wardrobes.

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Also manufacturers of: Circle A Folding Partitions, Sectional Partitions, Rolling Partitions, Steel or Wood Portable Bleachers, Steel Grandstands

CIRCLE A
School Wardrobes

(Concluded from Page 90)

completed six terms taking office seventeen years ago.

♦ MR. RUDOLPH D. LINDQUIST, who was recently appointed as president of the State Teachers' College at Chico. Calif., was born in Oakland, and received his education in the University of California, from which he received the degrees of A.B. and M.A. His professional career began as a rural teacher in Minnesota and Kansas. Later he accepted a position as vice-principal in the Elko county high school of Nevada. In 1919, he went to Berkeley as a supervising principal. He was director of research for the Oakland public schools from 1925 to 1927, and assistant superintendent in charge of elementary education from 1927 to 1931. He is chairman of the 1933 yearbook committee of the department of supervisors and directors of teaching of the National Education Association.

NEWS OF SCHOOL OFFICIALS

♦ The school board of Athens, Ohio, has reorganized for the next year with the election of MR. GEORGE WHIPPLE as president, and MR. A. B. ROE as vice-president. PROF. L. J. ADDICOTT will continue as clerk-treasurer of the board.

♦ MR. M. G. PECK has been reëlected as president, and MR. ALDEN HOPKINSON as vice-president, of the board of education at Ashtabula, Ohio.

♦ DR. B. O. KREILICK has been reëlected as president of the school board of Fremont, Ohio. MR. C. F. WALTON continues as clerk of the board.

♦ MR. W. H. COLES has been reëlected as president, and DR. G. E. MCCULLOUGH as vice-president, of the board of education of Troy, Ohio.

♦ MR. J. E. TORBERT has been elected as president of the school board of Sebring, Ohio. Other officers elected were MR. HARRY CREWSON, vice-president, and MR. C. B. HAMILTON, clerk of the board.

♦ The school board of Piqua, Ohio, has been reorganized, with the reëlection of MR. GEORGE WASHING as president, MR. W. H. KOESTER as vice-president, and MR. F. P. BROTHERTON as clerk.

♦ MR. W. H. STUCKEY has been reëlected as president of the school board of Lancaster, Ohio. Other officers elected were MR. P. D. TURNER, vice-president, and MR. T. L. HEWETSON as clerk.

♦ DR. J. L. CARTER has been reëlected as president of the school board of Fostoria, Ohio. MR. T. M. SEGNER was named as vice-president, and MR. W. J. DAUB as clerk-treasurer.

♦ The school board of Akron, Ohio, has reorganized, with the reëlection of MR. G. W. SHERMAN as president, MR. C. R. FOUST as vice-president, and MISS IRENE MOSES as clerk-treasurer.

♦ The school board of Bellefontaine, Ohio, has reorganized, with the reëlection of MR. WILLIAM WEISER as president., MR. F. C. SPITTLE as vice-president, and MR. W. S. JONES as clerk.

♦ The school board of Mansfield, Ohio, has reorganized, with the reëlection of MR. G. A. DAVIS as president, MR. D. F. SHAFER as vice-president, and and DR. J. H. BRISTOR as clerk.

♦ The school board of East Palestine, Ohio, has reorganized, with the reëlection of MR. C. E. OLIVER as president, MR. EMERY SHULTZ as vice-president, and MR. C. S. WARD as clerk.

♦ The school board of Warren, Ohio, has reorganized, with the reëlection of MR. ZENAS KLINE as president, MR. F. J. THOMAS as vice-president, and MISS ANNA MASTELLAR as clerk.

♦ The school board of Dennison, Ohio, has reorganized, with the reëlection of MR. A. P. DABERKO as president, MR. O. S. O'DONNELL as vice-president, and MR. G. W. METCALF as secretary-treasurer.

♦ MR. W. H. HERRNSTEIN has been reëlected as president, and MR. W. H. KETTRA as vice-president, of the school board of Chillicothe, Ohio.

♦ MR. CLARENCE L. MURRAY, superintendent of schools of LaGrange county, Ind., has recently become state high-school inspector.

♦ MR. C. S. BLOOD, district school superintendent of St. Lawrence county, N. Y., has been elected president of the New York Teachers' Association. Mr. Blood succeeds Daniel J. Kelly, of Binghamton, the retiring president.

♦ DR. FRANCIS G. BLAIR has been reëlected state superintendent of public instruction of Illinois.

♦ MR. WILLIAM J. LINNELL, superintendent of schools of the second supervisory district of Jefferson county, N. Y., is now engaged in his fiftieth year of active school service.

♦ MR. MILTON W. CAROTHERS has recently been appointed supervising principal of schools at Tampa, Fla., to succeed Omer Carmichael, who is completing a graduate course at Teachers College, Columbia University.

♦ MR. GEORGE H. KRUG has taken over the superintendency at Troy, N. Y. Mr. Krug succeeds ARVIE ELDRED, who has become executive secretary of the New York Teachers' Association.

♦ MR. MARTIN L. SMITH, former assistant superintendent of schools, died at Racine, Wis., at the age of 80.

♦ MR. GROVER VANDUYN, formerly superintendent of schools of Hancock county, Ind., has been appointed as assistant state superintendent of public instruction for the state of Indiana.

♦ MR. GEORGE C. COLE, of Lawrenceburg, Ind., state superintendent-elect, will assume office on March 15.

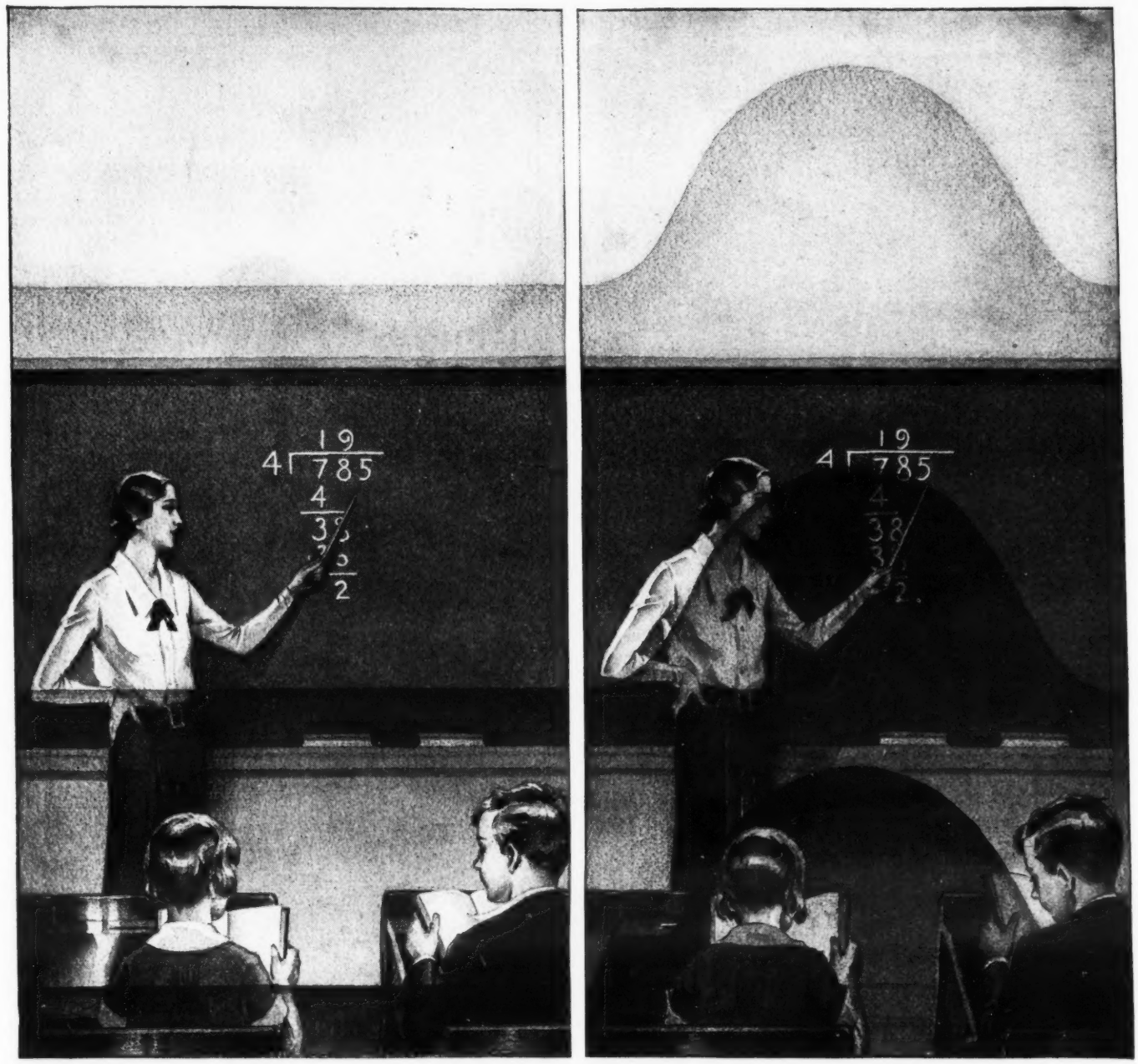
♦ MR. J. WILLIAM BOSSE, formerly of Evansville, Ind., has been appointed director of statistics and educational reference for the state education department.

MR. BARNES RETIRED

Mr. C. H. Barnes, who retired as superintendent of schools of St. Louis county, Minn., on January 5, after a long period of service, was head of probably the largest county in the country and through his splendid service to the school system gained an enviable record as one of the outstanding administrators.

Practically every professional and administrative virtue of education in St. Louis county is due directly, or indirectly, to the wisdom, devotion, and splendid spirit of Mr. Barnes.

At a public meeting of appreciation on December 13, state school officials, presidents of the leading state colleges and normal schools, and educators from other states joined in their recognition of the eminent service rendered the county, state, and country, by Mr. Barnes. The rural-school teachers and the office staff of the St. Louis county schools presented him with a gold watch.



Why some backward pupils are backward

Everyone knows the dangers of eyestrain for young eyes; the headaches, drowsiness and apparent stupidity that can come from improper, *unbalanced* lighting. Scientific illumination charts reveal many interesting facts which point the way to proper lighting. However, Balanced Lighting, is a simple, commonsense choice of the "happy medium" between the extreme characteristics among the many types of lighting units and the proper application of the unit chosen. Let a Graybar Lighting specialist tell you more about Balanced Lighting and help you select units. Note this coupon below.

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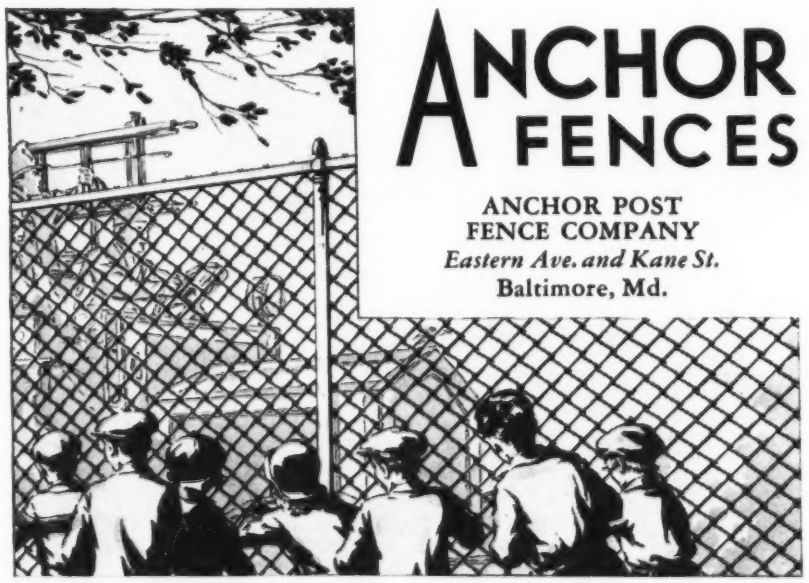
SIX IS NOT THE AGE OF REASON

DANGER signs, discipline, and safety lectures are but meaningless words to the child mind. Their safety from motor-infested highways can only be controlled by fence protection.

An Anchor Fence conveys its own warnings and compels their obedience. Delegate your responsibility to an Anchor Fence.

Just call the local Anchor representative for the solution of your fencing problem. He will be glad to serve you.



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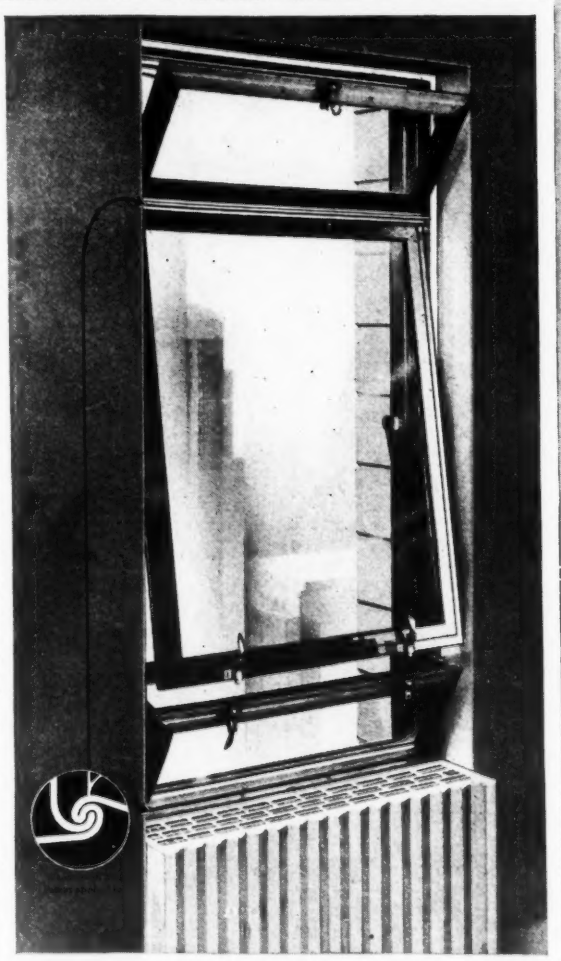

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This window is weather-proof when closed and draft-proof when opened. Both sides of all sashes can be washed from the interior. It will not rattle, and can be operated with ease. The stationary bar between lower and middle sash makes it a safety window. Made in Bronze, Aluminum Alloy or Steel.

Send for complete description, specifications and F.S. details.

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Niles, Michigan Subsidiary: Berkeley, Calif.

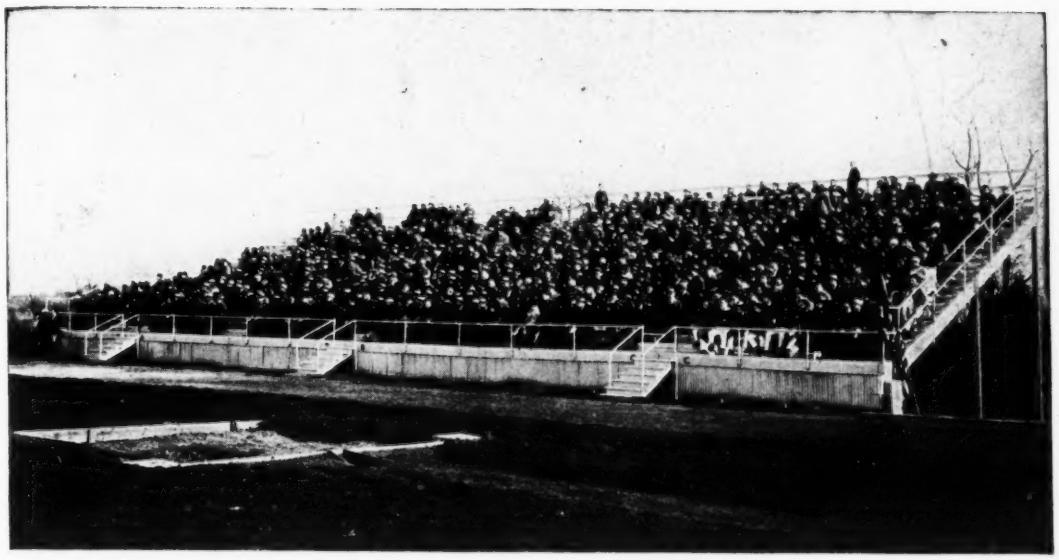
PITTSBURGH DES MOINES

Provides Maximum Capacity with Low Cost and Safety

The PITTSBURGH-DES MOINES all-steel grandstand is a structure incomparable in safety, appearance, and low initial and maintenance costs. Its advantages are unlimited.

Trained engineers and erection crews guarantee first class jobs and complete satisfaction to any purchaser of the PITTSBURGH - DES MOINES grandstand.

Two shops, one in Pittsburgh, Pa., and another in Des Moines, Iowa, are equipped with all the facilities necessary to turn out first class work. Competent and experienced hands carry any grandstand job from start to finish.



A Pittsburgh-Des Moines Grandstand at Ursinus College, Collegeville, Pa. Capacity 1440 persons.

PDM Grandstands are built in standard sections, which can be added to or double decked as required. The clear space beneath the stand may serve as offices or storage and dressing rooms. Comfortable wooden seats raised on steel supports give ample leg and foot room.

Further information on our all-steel grandstands is given in our free folder No. 87

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School-Board News

THE SCHOOL BOARD'S POSITION IN THE COMMUNITY

Mr. Guy L. Freeman, writing in a daily column "From Sun to Sun," in the Erie, Pa., *Dispatch-Herald,* makes the following pertinent remarks concerning the local board of education:

"How many Erie people know exactly how our public schools are governed, how they are provided for by the Pennsylvania State constitution, and what the legal qualifications for becoming a school director really are? Not a great many of our Erie voters, I feel sure. And at this time, when Erie's school board rides the front pages of the newspapers with great regularity, it behooves all citizens, particularly parents of children of school age, to acquaint themselves with public school responsibility.

"Pennsylvania's state constitution commands the legislature to 'provide for the maintenance and support of a thorough and efficient system of public schools wherein all children above the age of six years may be educated,' and to 'appropriate at least one million dollars yearly for that purpose.' But the body of immediate authority over the schools of any school district, including, of course, Erie, is the board of education. There are about 2,600 such boards in the state, and in districts of the second class, such as Erie, there are nine members of the school board, all of whom are elected by vote of the people.

"Erie's board of education determines its own policies, and possesses enormous power as to discretion. *It is independent of every other official body of the city or state!* Think what that means, and consider the huge investment in Erie schools. Is not the local school board a tremendously important body? It is governed only by the laws of the state. The board prescribes the course of study, locates and builds the schoolhouses, buys and sells real estate and textbooks, employs and pays the teachers, principals, clerks, janitors, nurses and all other employees. It fixes salaries, borrows money, *determines the tax rate,* and is subject only to the general school-code limitations.

"Who can become a school director? The law says 'any citizen having good moral character who is 21 years of age and over, and who has been a resident of the school district for at least one year prior to his election.' There are some officials, however, who are ineligible. This list includes the mayor, county commissioners, district attorneys, city treasurers, councilmen, etc., various county officers, and all employees, including teachers, of the schools. Erie has no women on the school board. Why, I do not know, as women are eligible and in some districts have proved to be the most valuable members.

"Many people cherish the belief that school-board members get salaries — ample salaries. They receive no compensation for their services, beyond the compensation of serving their community faithfully and well — when they do render such character of service. Graft? One hears of such a thing, certainly, but, despite the fact that Sun to Sun has not hesitated to deplore some actions of Erie's school board, this column cannot seriously entertain the idea of common dishonesty on the part of school-board members. Mistakes of the school board, as we see it, are mistakes of judgment only, and I, for one, find no pleasure in heckling the board for the mere sake of having something to write. But this column cannot but stress the vital importance of exercising a wise discrimination in selecting those persons who absolutely control the destinies of Erie's public schools."

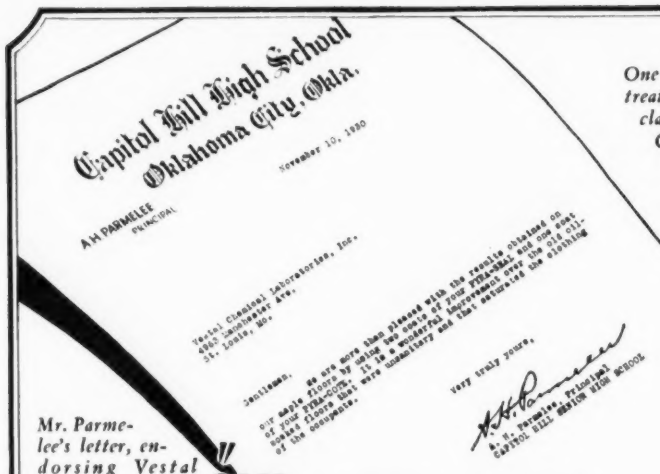
OBSERVATIONS OF A SCHOOL-BOARD MEMBER

"When it was first suggested that I serve as a member of a school board, I felt that only a man who has much leisure should accept the responsibility," said S. L. Macdonald, of Fort Collins, Colorado, recently in a public address.

"I assumed that it would be my duty to know the legal aspects of school-board activities, to acquaint myself with the taxation rights of school districts, to be able to give advice on the apportionment of income for building funds, sinking funds, current-expense funds, to recognize proper sanitation and health measures in buildings and grounds, and to know something of the foibles and fads of modern education.

"But I am now of the opinion that the retired man of wealth with time for all this detail is not the most desirable timber for a school board. It is impossible for any person to be a competent judge on several different lines as divergent as taxation and methods of teaching. My attention has been called to several instances where a board member of infinite leisure has interfered very materially with the progress of the schools.

"In a particular case a member had the habit of visiting schoolrooms while in session, and making suggestions as to method and content of instruction. His convictions on certain forms and rules of our mother tongue had made him


Capitol Hill High School
Oklahoma City, Okla.

November 10, 1930

A. H. PARMELEE
PRINCIPAL

Vestal Chemical Laboratories, Inc.
4963 Shaweneer Ave.
St. Louis, Mo.

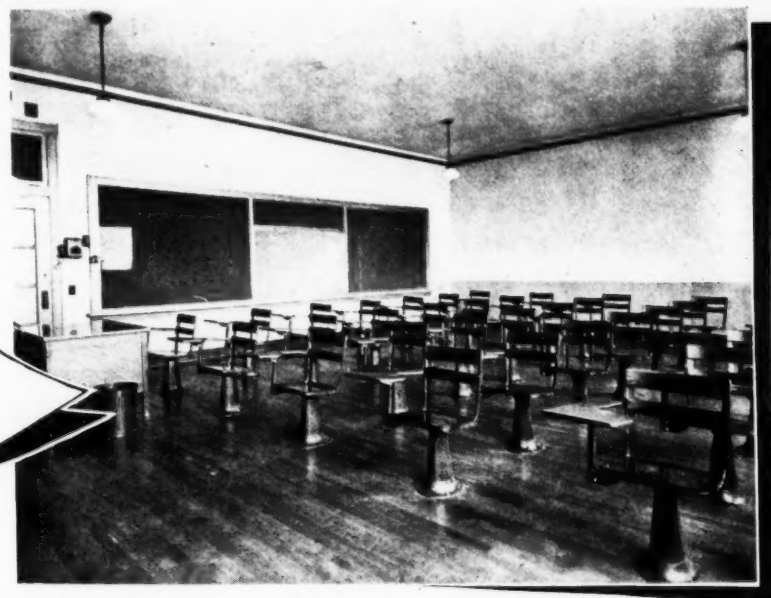
Gentlemen:

Our maple floors we are more than pleased with the results obtained on of your PYRA-SEAL and PYRA-COTE. Using two coats of your PYRA-SEAL and one coat of your PYRA-COTE it is a wonderful improvement over the old oil-soaked floors that were unsanitary and that saturated the clothing of the occupants.

Very truly yours,

A. H. Parmelee, Principal
CAPITOL HILL HIGH SCHOOL

Mr. Parmelee's letter, endorsing Vestal Methods and Products.



One of the Vestal treated floors in a classroom of the Capitol Hill High School, Oklahoma City.

"We are more than pleased with the results obtained on our maple floors by using your PYRA-SEAL and PYRA-COTE"

THESE words . . . from the letter reproduced above, over the signature of Mr. A. H. Parmelee, Principal of the Capitol Hill High School, prove conclusively the merits of Vestal Methods and Products.

Mr. Parmelee's letter voices the sentiment of many other school officials, all over the country, who have solved their floor maintenance problems by these Methods and Products.

No longer need the school floor be a question that taxes the minds of those that guard the health of its students. No longer need oil-soaked, unsightly, unsanitary floors be regarded as a necessary evil in the otherwise modern school building.

PYRA-SEAL and PYRA-COTE are proving the universal solution to this problem. Easy to apply . . . leaving a sanitary, hard surfaced floor that is easy to maintain.

Visit the VESTAL BOOTH No. 302 N. E. A. CONVENTION DETROIT FEB. 21-26

Ask about Vestal Methods and Products at Booth No. 302, at the Convention. Let the Vestal Representatives show you how *simple and economical* the PYRA-SEAL and PYRA-COTE Method proves to be, along with other products for any floor maintenance program. Or, if you don't attend . . . write for particulars.

VESTAL CHEMICAL COMPANY
ST. LOUIS, U.S.A.

a veritable crank on this subject. His official relationships to the teachers combined with his odd slant on grammar made him an unwelcome visitor and a pernicious influence. He had been a teacher in his early manhood, a generation previous, and had never recovered from the conceit that he knew something about teaching.

"In my way of thinking a school board of five persons should be representative of the community in the broadest sense. I do not mean that board members should represent the varied material interests of the community, as for example the agricultural, the mercantile, the industrial, the professional, etc. I mean they should be men of large mind and have at heart the best interests of the whole community. It should go without saying that no single interest as such should be represented on the school board.

"And above all things school-board members should be busy and successful persons. Naturally they will be wide-awake, sane, progressive. Their experience has given them a broad charity for the *genus homo*. They have a sense of fairness and justice forged in the laboratory of service to others. They will not take at face value a rumor against a teacher, principal, or supervisor. They will hold up the hands of those who are chosen to direct the lives of the children till they are sure of fair play. They will be sympathetic to all suggested improvements in the schools and once convinced of their desirability they will strive to find means for their introduction.

"They meet the superintendent in their regular appointed sessions, listen to his reports and recommendations, probably modify and ameliorate his plans, give some good advice, and vote their best judgment. Their business is to determine general policies, not to say what textbook is to be adopted in geometry. They respect the superintendent as their responsible agent, and if that respect must be abandoned the only solution is a new superintendent."

Mr. Macdonald closed his discussion by saying: "Our first obligation is to the young of the community and to those adults who may be benefited by the service of education. If society is to benefit by every one of its members potentially, then it owes it to everyone to have a chance to grow and unfold in keeping with this talent.

"School boards occupy a unique position in American official life. Someone has said that it is the purpose of a school board 'not to save money, but to spend it wisely.' The fruits of this expenditure are not so evident in the present as they will be in the future, for it is the quality of the next generation that must bear testimony as to the wisdom of our acts here and now. Within the means at our disposal it is our responsibility to provide the fullest opportunity for every boy and every girl to develop into a happy and a useful and enlightened factor of society."

STUDENT INSURANCE — WHY NOT?

Don Logan

The question of who should bear the expense resulting from injuries occurring while participating in high-school athletics has been a perplexing one. Attempts to adjust such a situation usually terminate in ill-feeling between the parent and the teacher. By legal decision, schools in the performance of this function of education, have been found not liable for such injuries. It is also illegal to use school funds for reimbursing an injured individual.

Realizing the profoundness of the situation the Wisconsin Interscholastic Athletic Association has recently put into operation a limited accident-benefit plan. Only the following injuries will be benefited:

Entire sight of one eye, is irrevocably lost	$200
Both arms broken above elbows	150
Both legs broken above knees	150
Both bones of either arm broken between wrist and elbows	100
Both bones of either leg broken between ankle and knee	100
Either leg broken above knee	100
Either arm broken above elbow	75
Either bone of either leg broken between ankle and knee	50
Either bone of either arm broken between wrist and elbow	50
Collar bone broken	40

Up to and including October 22, 1930, accidents covered by the schedule were reported. This list of injuries included 7 broken legs, 16 broken collar bones, and 11 broken arms. Of these injuries, 16 were sustained in games, while 18 occurred during practice.

It must be noted that the plan is restricted to active member schools, that it is experimental, and that the plan is not in any sense insurance, but simply a mutual-benefit plan. The treasury surplus will be available to pay the benefits. The accident must occur during a game, or scheduled practice. Coaches, members of the faculty, and girl students will not be compensated.

There is always some danger of injury in any activity, whether connected with athletics, or in a laboratory. Explosions, poor equipment, mistakes in laboratories, and accidents in gymnasiums have resulted in serious injuries. Why not insure the students?

SCHOOL-BOARD NEWS

♦ Providence, R. I. The work of redistricting the city into seven districts, in place of five, for school-committee elections, has recently been completed by the commission appointed by the governor to do the work. Under the new plan, seven districts are designed by the letters A to G, inclusive. The present members of the committee will hold over until their successors are elected under the new plan. The first election will be held in

(Continued on Page 98)

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THE NEW CONTROL CHART
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BY S. C. JOHNSON & SON

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• Johnson Floor Maintenance Engineers are now calling (*on request*) on the leading schools in the country—filling out the new Johnson Control Chart

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Above Illustration
Courtesy Wright
Rubber Products Co.

ONEX-SEAL . . . A new finish which waterproofs and polishes tile, marble, terrazzo and slate floors. Gives a beautiful gloss and saves the wear on your floors. One Coat Seals—Two Coats Seal and Polish.

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An economical, easily used preparation, which cleans all types of floors, SHINE-ALL meets with the enthusiastic commendation of leading floor manufacturers, building superintendents, architects, etc.

SHINE-ALL thoroughly removes the dirt and grease, and leaves a thin filler coating which puts new life into the floors and protects them against wear. It cleans and polishes the floors in one operation — and effects a splendid saving in time and money.

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Linoleum, Wood, Rubber, Cork,
Terrazzo, Marble and Tile,
as well as painted and
varnished surfaces.

SHINE-ALL SALES COMPANY
Distributors for
HILLYARD CHEMICAL COMPANY
St. Joseph, Missouri.

Visit Hillyard Booths Nos. 355 and 356 at the N.E.A. Convention in Detroit, Feb. 21 to 26.

This is one of a series showing various uses of SHINE-ALL.

(Continued from Page 96)

November, 1931, at which time the members will be chosen from three of the seven districts. Under the law, each of the present terms of members will be extended a year.

♦ Madison, Wis. The school board has taken out an insurance policy to cover the risks borne by workers in the high-school cafeteria. The action was taken following an accident to one of the employees, which cost the board $86.

♦ Mansfield, Ohio. The board of education and the city government are involved in a controversy over the question of payment for water meters in the school buildings. The meters were installed by the city, and a bill of $665 presented to pay for the expense. The school board refused to pay the bill, claiming that there was no agreement that it should stand the expense. The city pointed out that it could not install meters at its own expense. The question is no nearer solution than it was at first.

♦ The school board of Geneva, Ohio, has demanded the collection of tuition from several pupils in a district which has been disputed territory. The section which lies near the village-school district, sends four or five pupils to the Geneva school. The pupils were continued in school during the first semester, but with the opening of the second semester a demand was made that the tuition be paid.

♦ The board of education of Akron, Ohio, has withdrawn its financial support from the teachers' college at Akron University. An additional $52,000 has been taken from the 1931 school budget in a determined effort to carry on the schools with the funds available. As a result of the reduction, the board's expenditures will total $600 less than the anticipated income.

♦ Rockford, Ill. The terms of five members of the board of education will expire next spring, unless they are reappointed by the mayor. The terms of five other members do not expire until the spring of 1932.

♦ Manitowoc, Wis. At a recent meeting of the school board, parents of nonresident students were given a year's time in which to make up back payments of tuition for their children. The action has ended a situation which threatened to force some parents to take their children from school this year, because they were not able to pay the back money due the city.

♦ The school board of Mankato, Minn., has taken steps to secure the passage of legislation, allowing the election of school-board members at large, rather than by precints as at present. A change in the system of election at Mankato had been advocated by Pres. J. W. Andrews. It was pointed out that it would be difficult to obtain legislation for Mankato alone, but that an attempt could be made to pass a bill making the election at large optional in cities of 10,000 to 20,000 population.

♦ Medford, Mass. At a recent meeting of the school board, the city council was asked to provide transportation for school children residing 1.3 miles or more from school. The city has been asked to provide an appropriation to cover the cost of such transportation. Under the plan, children will be supplied with tickets good for use on any street car or bus line.

♦ Lorain, Ohio. The school board has purchased an audiometer to be used in testing the hearing of school children. The testing will be conducted under the direction of the school nurses. All children found to have defective hearing will be recommended for corrective treatment.

♦ Bay City, Mich. By a vote of 5 to 2, the members of the board of education recently defeated a resolution of John Dardas, a member, which declared all married women teachers eligible for teaching positions in the schools. Although voting for his resolution, Mr. Dardas was opposed to the principle of employing married women teachers. The resolution contended that Mrs. Keen, a teacher had been reëngaged after dispensing with her services in March, 1929. In reëmploying the teacher in September, 1930, it was stated that the action was in violation of the board's rule regarding married teachers. It is expected that the married-teacher question will be brought up next spring when the teachers are employed for the next school year.

♦ Chicago, Ill. When the school board held its regular hearing on the school budget for 1931, it was faced with demands for raises in pay for 27 engineer-custodians, for civil-service clerks, parole officers, and school janitors. The engineer-custodians are asking an increase of $15 per month each, making a total of $4,860 a year. The school janitors are seeking an increase from $1,800 to $1,992 a year.

The school principals, who have had no increase in salaries since 1922, made another plea for more money, but they have little hope of getting the increase.

♦ Manchester, N. H. The school board has adopted a budget for 1931, calling for an appropriation of $793,000 for school purposes. The budget represents an increase of $10,000 in operating expenses over the year 1930, which is attributed to the automatic salary increases, and the addition of new teachers required by increased enrollment.

(Concluded on Page 100)

MODERN SCHOOL ADMINISTRATION

Today, school buildings are constructed with rooms, lockers, equipment, and devices, adjusted by exact measurement to the sizes and needs of the pupils who use them. Textbook makers vie with each other to secure stories, pictures, and questions adjusted to the children's measured interests and levels of development. Administrators burn midnight oil, as well as devote many hours of daylight labor, in devising schedules, elections, sections, and courses to fit the diverse needs of the pupils to whom they minister. Sectioning on the basis of scores on intelligence tests has swept the country like wildfire. When we look back over the changes which have taken place in the administration of our schools, progress in education has had as its most evident characteristic a large amount of adjustment to differences in individual natures and needs.—S. A. Courtis, Educational Consultant, Detroit, Michigan.

49 PEERVENTS installed in the new Sewanhaka High School

PEERVENTS are often selected for these large modern schools by architects who have had experience with PEERVENTS on previous school buildings or other public or semi-public buildings. Such is the case with the new Sewanhaka Central High School in Floral Park, Long Island.

Many new school buildings are also PEERVENT equipped by the recommendation of another school board which has used the PEERVENT System.

Economy and noiseless and efficient operation are important considerations in the selection of heating and ventilation units. The PEERVENT System gives all of these points. Building superintendents from coast to coast tell of the excellent service given by these PEERVENTS.

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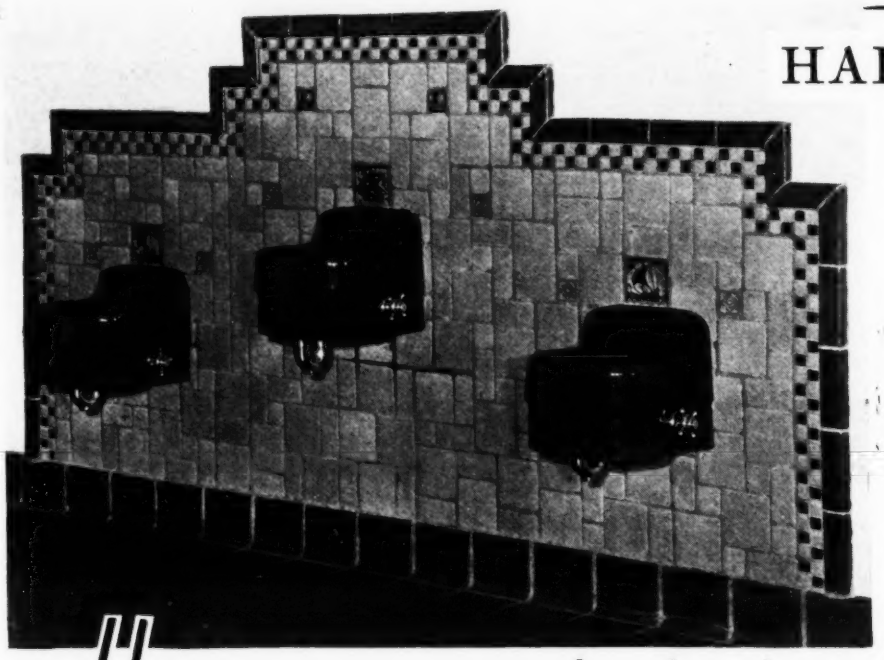
Drinking Fountains



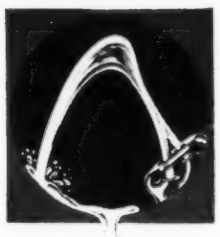
A Clever Arrangement

of No. 601 wall-type in colored glaze on tile panel. (Eschweiler & Eschweiler, Arch., Shorewood Wisc., grade school.)

Non-Squirting

Children like to play. Squirting the water causes mess and annoyance as well as property damage. Halsey Taylor fountains are non-squirting—a vital feature and another reason for their choice in schools!

Harmony of design



Their practical, sanitary features are not the only reasons Halsey Taylor fountains are so often chosen for school installations. Their beauty of design and variety of types make Halsey Taylor fountains the ideal specification, allowing you to adapt their use to any interior decorative treatment . . . The Halsey W. Taylor Co., Warren, Ohio.

THE SPECIFICATION FOR SANITATION

(Concluded from Page 98)

♦ Bridgeport, Ohio. The school district reduced its bonded indebtedness to the extent of $24,100 during the year 1930, according to a report of the clerk of the school board. The total bonded indebtedness on December 31, 1930, was $300,046, as compared with $324,146 at the beginning of the year.

♦ New Lexington, Ohio. The amount of funds from local tax levies, exclusive of the 2.65 mills levy, for current and other expenses of the board during the fiscal year ending December, 1931, has been approved at $47,300, or 10.15 rate in mills.

♦ Norfolk, Nebr. During a period of ten years, the school board has retired $237,000 worth of school bonds, which has lowered the indebtedness of the schools from $711,000 to $474,000. Money for the payment of the bond issues comes out of the general levy, which in Nebraska is average.

♦ A recent report on the salaries of high-school principals, and superintendents of schools, issued by the bureau of municipal information, of the Wisconsin University Extension Division has shown that, among Wisconsin cities, Milwaukee maintains the highest salary scale for its school administrators.

The report shows that the Milwaukee superintendent of schools is paid $11,000 per year, and high-school principals are paid as follows: Bay View, $5,120; North Division, $4,760; Riverside, $5,000; Lincoln, $5,000; South Division, $5,120; Washington, $5,360; West Division, $5,120; Custer, $3,750.

Kenosha, a second-class city, pays its junior-high-school principals $3,832, $3,645, and $3,622 respectively, the senior-high-school principal $4,400, and the city superintendent $6,500.

Cities of the third-class pay salaries as follows: Appleton, junior high school, $3,800, $3,800, and $4,000; senior high, $4,100; superintendent, $5,250; Ashland, high school, $3,700; superintendent, $4,200; Beloit, high school, $4,000; superintendent, $4,500; Eau Claire, high school, $3,100; superintendent, $5,000; Fond du Lac, junior high, $3,500; senior high, $4,000; superintendent, $5,500; Green Bay, junior high, $3,200; senior high, $3,900 each; superintendent, $4,500.

♦ The school costs of Iowa, according to a report made by Agnes Samuelson, state superintendent, were $9,028,919 in 1900 and $55,799,803 in 1929, noting an increase of 500 per cent. While the population has shown but a slight increase over 1900, the investments in school buildings have increased seven times over what they were 30 years ago. There are 4,870 school corporations in the state, three fourths of which maintain one-teacher schools in the open country.

♦ Detroit, Mich. The school board recently cut $680,000 additional from the maintenance fund of the school system for 1931–32, making the total reductions to date $1,505,000, and bringing the budget request to within $613,000 of the amount received from taxpayers this year.

Of the reductions ordered, $500,000 represented an increase in the estimate of primary funds to be received from the state. If the increase does not materialize, the amount will appear in the following year's budget as a deficit, to be made up by the taxpayers at that time.

The money received from the primary fund this year was $7,243,000, or nearly $1,200,000 more than was anticipated by the board in making its budget. The increase paid for the salary increases granted teachers this year, and enabled credits to be transferred to other funds. It is estimated that the school system will receive $7,692,000 next year, instead of the $7,192,000 asked by Supt. Frank Cody.

♦ Canton, Ohio. The school board has within a period of six years reduced its net bonded indebtedness to $2,217,216, cutting $274,000 off during the calendar year 1930. In 1925, the board had a bonded debt of $7,903,000. In 1931, this debt had been reduced to $6,207,000, and the sinking-fund reserve had been built up to $526,065, leaving a total net debt of $5,680,934.

♦ Conneaut, Ohio. The school board has adopted a budget for the year 1931, calling for an appropriation of $244,860 for the school purposes. Last January, the board estimated its appropriations at $250,180 for the year, and in July asked for a budget of $233,596.

♦ Marion, Ohio. The school board has adopted a budget of approximately $432,645 for the year 1931. The estimated expenditures are slightly higher than the actual expenses for 1930, which were $404,154. The largest item in the budget is $312,200 for salaries of teachers. The operation of the various buildings will cost $32,850.

♦ LaCrosse, Wis. Tuition in the public schools has reached a point where it has become an item of importance in the receipts of school money, according to Mr. George Howe, business manager of the board of education. In his report, Mr. Howe points out that the cost of tuition has advanced steadily from $25 a year per pupil in 1915, to $100 in 1928. The total tuition advanced from $2,500 for the school year 1914–15, to $16,500 for the school year 1929–30. An elaborate system of cross-checking is used in the schools in tracing nonresident students. The system is carried out by the superintendent, the principals, the truant officer, and the business manager.

PROGRESS VERSUS TRADITION

Traditions die hard and slowly. Tradition has retarded progress as much as has any one thing. This has been especially true in the progress of educational facilities (organization, supervision, methods). The people are prone to cling to their traditions and to resent any movement that in any manner whatsoever might cause these traditions to come "tumbling down."

"But times do change" and with the change in times comes the necessity of change within established institutions to meet these changes in social, economic, and industrial institutions. Education has changed its organization, its supervision, and its methods, and tomorrow shall see still greater changes. — D. E. Wiedman, Superintendent, Bellingham, Washington.

Perfect attendance

. . . . *but* how about

perfect *attention*?

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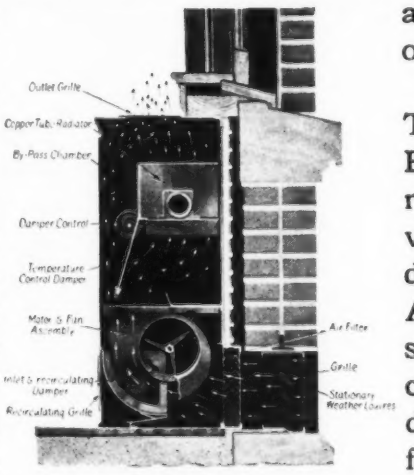
So much depends upon proper heating and ventilating of the schoolroom that too much care cannot be taken in the selection of heating and ventilating equipment. One of the finest tributes to the efficiency, economy and reliability of Universal Unit Heaters is that they are being constantly installed *with complete satisfaction* in many of the nation's leading schools.



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A Wickwire Spencer Chain Link Fence on your boundaries is an effective measure of protection. It is rugged and permanent. The *copper bearing steel* of the framework and fabric coated by hot dipped galvanizing does resist weather.

We will gladly send a representative to see you if you request it. Without obligation on your part, he will suggest a fence that is "more than a moral boundary."

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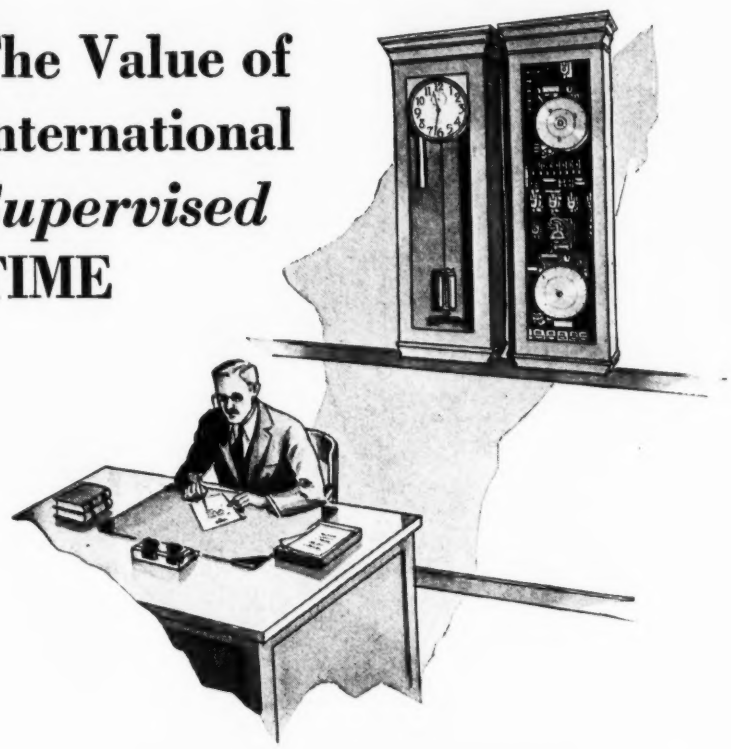

. . . *in school administration*

SKELETON DIAL AUDITORIUM CLOCK

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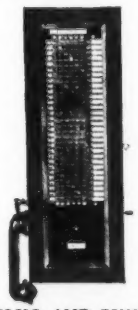

PLUG AND PUSH BUTTON BOARD

The primary function of a school superintendent is to direct education. It is his responsibility—both to the schools under his jurisdiction and the taxpayers supporting them—to devote his entire time to constructive thinking and planning.

Straightening out principals' complaints or worrying about reported confusion and schedule upsets should not be allowed to distract the superintendent from his professional duties. Mechanical equipment should be therefore selected with this point in mind—particularly that equipment for controlling class activities.

International Supervised Time and Program Control eliminates the possibility of annoying and detrimental distractions in school administration. Its thorough dependability makes school schedule maintenance absolutely trouble free. The superintendent whose schools are International equipped is assured complete relief from the annoyances of inadequate school time control.

Write for your copy of the new International treatise called "Time Control in the School."

We call your attention to the International Exhibit at the Annual National Education Association Convention of the Department of Superintendence at Detroit, Mich., February 21st to 26th. A complete line of International equipment will be on display in booth numbers 221, 222, and 223.

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One of the major problems in a school sanitation system is that of keeping the corridors clean at all times. It is a great temptation for students to deposit gum, waste paper, etc., in some out-of-the-way corner, and unless this temptation is checked, rubbish begins to accumulate and a breeding place for disease-carrying germs is created.

The Solar System of Waste Disposal offers a ready solution to this problem. By providing convenient stations for the deposit of waste material, rubbish in and about the building is completely eliminated. Children never tire of using a Solar. Its gravity-operated top holds a mysterious fascination that never wears off. Wherever waste accumulates, Solars will help in your constant war against disease, fire, disorder, and expense.

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offers a ready solution to all problems of sanitation in

Corridors	Playgrounds
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PHYSICAL QUALIFICATIONS FOR TEACHERS

"Every term brings to the teacher the problem of the misfit child. In order to cope with it, the teacher herself must not be a misfit. A teacher is in a poor position to improve physical handicaps in her pupils until she herself has been placed in as good physical condition as is possible. The teacher needs accurate vision and hearing more than does the pupil. Speech defects or an unpleasant voice lower her ability to convey her thoughts. Faulty physiological condition disqualifies an individual for a good many vocations. Certainly it should disqualify for the important position of teaching and controlling of children."

This statement was recently made in a public address by Dr. Earl H. Coleman, director of physical education, Fresno, Calif. The expert continued:

"The importance of the problem of physical and mental fitness for teaching can be viewed from several angles. There is the economic aspect. It is a waste of school funds, and therefore an injustice when that person, on account of physical unfitness, will be absent often from the classroom, or will be an early candidate for disability compensation. Dr. Howe, of New York state, found that of those teachers retiring on account of disability, 50 per cent were under the age of 50. For a vocation ranking among the most healthful, this indicates presumptively defects in those teachers in the beginning. Big business concerns guard the health of their employees, for every day lost because of sickness is a distinct money loss to the company.

"The teacher who is regularly or frequently absent from school on account of illness certainly cannot do the most effective work. The teacher who has some repulsive physical defect will have a depressant influence upon some pupils. There is always the danger of a pupil's acquiring by imitation the teacher's facial tic or speech defect. The teacher whose voice is unpleasant or cannot be understood, who cannot see well, or who has difficulty in hearing is certainly not fit to do a first-class job of teaching. The teacher who is cranky, irritable, or a trouble-maker is sure to have a very unhappy and disorderly group of pupils. The teacher who is physically unable to participate in the playground activities of her pupils, to get about the room, up or down stairs with facility is greatly handicapped in the work of teaching where that type of activity is desirable. The teacher who is subject to fainting spells must cause her pupils anxiety or harmful excitement. It is realized that examples can be given of most excellent teachers with various types of physical defects."

Dr. Coleman holds that the number of physically defective teachers runs from 6 to 12 per cent. He points out that in many school systems great care is exercised in the selection of teachers requiring a physical examination before employment is granted. From 300 replies received from physicians and principals the following defects should disqualify a teacher: Strabismus, speech defect, toxic goiter, serious cardiac defects, active tuberculosis, major orthopedic defects, unsightly blemishes, and emotional instability.

Dr. Coleman further says: "It is to be noted that in nearly all reports that the physical condition is the one thing that is stressed, yet in about 75 per cent of the letters from school physicians and school principals the mental and emotional instability is that which is emphasized as making many teachers unsatisfactory in their positions."

ATTACKING THE TEACHER-TENURE LAW

The California teacher-tenure law is being attacked by the several local boards of education. The law provides that after a teacher has been employed in a district for three years he can no longer be discharged without the approval of a court, providing the teacher appeals to the court.

The difficulties in this procedure, school officials point out, lie in the fact that the courts try the case not only on points of law and justice but on its merits.

A school board attempting to discharge a teacher who has appealed to the court must present evidence acceptable to the court, it was stated, and further the superintendents', principals', or school-board members' testimony is considered as merely hearsay and must be substantiated with concrete facts.

The only alternative open to school boards under the clause of tenure and if that clause remains in the modified law, school officials assert, is to discharge teachers at the end of the three-year probationary term.

When this is done, the county counsel has declared, such a teacher cannot be reëmployed, such reëmployment by the same district being considered evasion of the law.

The dismissal at the end of the three-year period is the only weapon available to compel the well-organized teachers to abandon the right of appeal to the courts, trustees declare, but whether the districts all over California would adopt such a policy is problematical.

TEACHERS

♦ Sabbatical leave of absence for the term beginning with February 2, was recently granted by Pres. George J. Ryan, of the New York City board of education, to 687 members of the teaching and supervising staffs. No leave for a full year was granted, although between 200 and 300 applications are pending for such grants.

♦ Lexington, Ky. During the school year 1930–31, the board of education will adopt new regulations covering the employment, retention, and retirement of teachers. The board recently ordered a special study, which has been undertaken under the direction of Prof. L. M. Chamberlain, of the University of Kentucky bureau of school service.

An actuarial study of the pension system will be undertaken in the near future, as a survey supplementary to an analysis of the teaching personnel. Up to the present time, only a few teachers have been retired under the provisions of the pen-

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sion fund, so that the fund is in an excellent condition.

♦ Paducah, Ky. The board of education of McCracken county has recently approved a resolution, providing for a higher standard of qualifications for teachers. To obtain positions in the county schools next year, new teachers, or those who were not employed last year, must have at least 48 college hours of work equivalent to one and a half years in college. A college degree for four years of work is required for teachers in the county high schools, with an exception in the case of teachers of special branches.

♦ A new teacher-tenure law has been prepared for introduction at the next session of the California state legislature. The work was done by a state committee on teacher tenure. The new law is intended to obviate some of the objections to the law as it now stands, and still maintain the tenure provision for teachers. At present, the law provides that after a teacher has held a certificate and taught for a period of three years, the position becomes permanent. Dismissal of such teachers may only be made upon proved charges of inefficiency or immorality.

♦ The school committee of Lawrence, Mass., has adopted a resolution disapproving the practice of those connected with the school system of accepting outside jobs and thus depriving others of employment. A definite rule on the subject could not be adopted but the resolution was as far as the school committee could go.

♦ The school board of Providence, R. I., has adopted a recommendation of Supt. A. J. Stoddard, providing for the termination of service of school employees who reach the age of 70.

MONTANA SCHOOL BOARDS' ASSOCIATION MEETS AT MISSOULA

The fifth annual meeting of the Montana School Boards' Association was held on January 12, 13, and 14, at Missoula, with 89 delegates in attendance, representing 78 school districts of the state. The delegates at the meeting represented members of school boards, including school trustees and clerks. Mr. J. D. Wallace, of Butte, presided at the sessions.

The association appointed a committee of five to review the proposed revision of the state high-school code and to make recommendations for action by the organization. A resolution regarding the sale and leasing of state lands, passed in 1930, was re-referred to the legislative committee for study and report.

President Wallace, who delivered the opening address, stated that Montana is the third state in the country to organize a state-wide school-board association. He paid a tribute to Mr. R. C. Elting, the originator of the plan. He pointed out that the organization of school boards does not contemplate any changes in the form of the state school system under the new law but merely takes up the work of making the trustees and county officials responsible for carrying out the law. Many school districts are now operating under a budget, and all districts are required to remain within the income provided by law. He held that supervision of the budget is necessary because trustees in some school districts are prone to budget for more money than is necessary to operate the schools.

Mr. J. G. Ragsdale, of Butte, the second speaker on the program, talked on "Americanization." Principal G. A. Ketcham, of Missoula, in a report on the proceedings of the high-school law revision committee, presented a draft of the proposed revised budget law. He led in a spirited discussion of the 7-mill levy for school purposes, and the revision of the present appropriation system. It was pointed out that the law does not aim to cure all the faults of the state system, but it offers a step toward improvement in that direction.

On Tuesday, the discussions centered on problems facing all classes of school districts in the state. Committee reports, election of officers, and a talk by Supt. Silas Gaiser, of Sidney, Mont., were the main features of the sessions. Mr. Frank Livingston, superintendent of schools of Wolf Point, presented the teachers' association plan for the establishment of a teachers' placement bureau. It was estimated that the amount paid out by Montana teachers to agencies averages between $25,000 and $30,000.

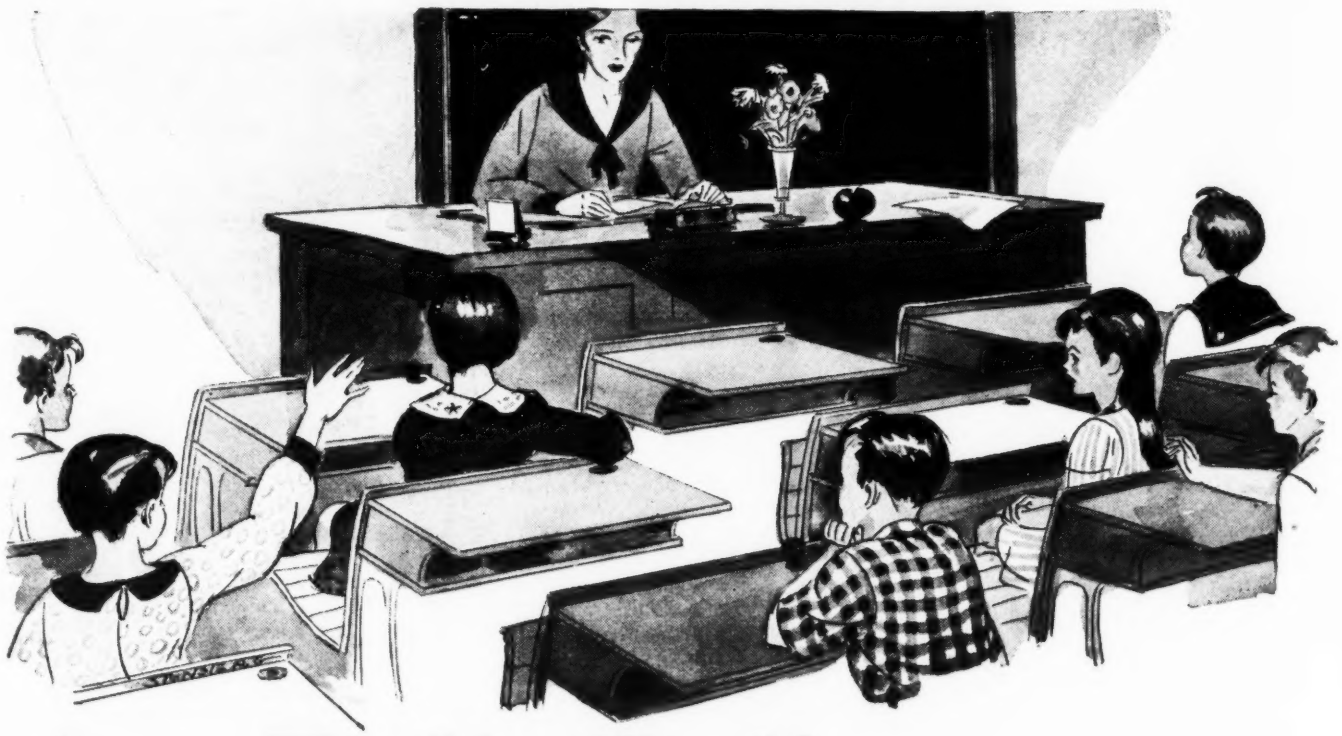
At the third day's sessions, Mr. W. T. Beaumont, secretary of the Montana Taxpayers' Association, showed that it costs $12,000,000 annually to educate the children of the state. An appeal for state supervision of the school system, with a plan for consolidating the districts and installing budget systems, were the main features of the address. He talked on the new school budget bill which has been introduced in the state legislature. Superintendent Gaiser spoke on "State-Wide Taxation," giving a detailed study of the various methods of taxation, and dealing in particular with the general property tax and the personal income tax. He advocated a change from the present property tax to some form of an income tax. Mr. Irving W. Smith, of Great Falls, in a talk on "Textbooks," pointed out that the first-class school districts have a right to do a limited amount of research work with textbooks. He suggested that the state board of education be asked to permit the substitution of one or more texts for those on the certified list, provided a change is not made more than once in four years, and that a limited number of books be changed at any one time. A modification of the powers of the board would be necessary to effect the change. Mr. Dominic Spogen, of Belt, took "Transportation" as his subject, pointing out that the school districts are unable to make adequate reimbursement to the farmers who must send their children into town to attend school. The drain of transportation costs and board-and-room for these pupils has proved a hardship for many parents.

Lewistown was selected as the meeting place for the next convention.

The meeting closed with the election of officers for the next year. Mr. J. D. Wallace was reëlected president; Mr. Fred Park, Hamilton, vice-president; Mr. J. C. Haglun, Cutbank, second vice-president; Mr. E. L. Marvin, Billings, secretary-treasurer.

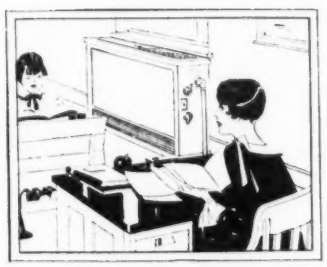
A BETTER MANKIND

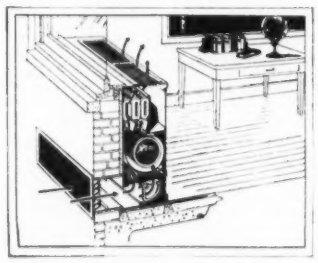
This irreconcilable contrast between the temporal and the eternal, between the world and the realm of God, between the misery and the barbarities which seem to be necessarily linked with all human civilization and the development to perfect humanity, has existed at all times; and the expression of Goethe, "to be a man means to be a fighter," which has been used to the point of banality, here takes on a profoundly deep meaning. We must not only fit into the world, which in many respects is always corrupt; no, we must present a brave front to all the bad habits and evidences of deterioration of each "modern" time, and we must fight to the last breath for an increasingly perfect development of mankind. — Paul Geheeb.



At Roll Call

— — — how many seats are empty?





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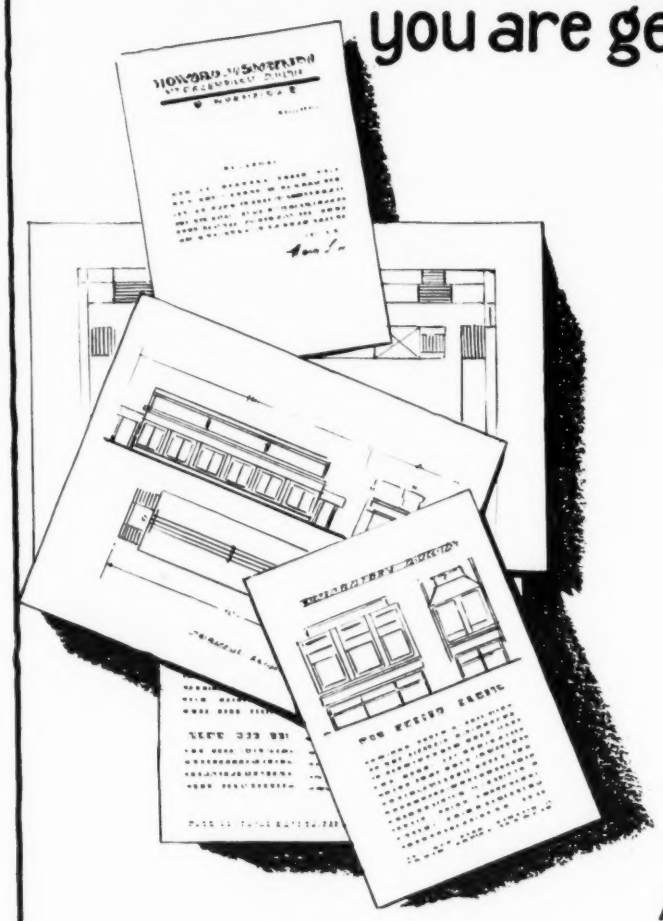

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Standard for Laboratory Construction.

CHICAGO CORRESPONDENCE

The Chicago newspapers are angry at the board of education because of its "$95,000,000 secret." The annual budget which was prepared behind closed doors, was undertaken at a secret session and the excluded newspapermen got what satisfaction they could out of the situation by "panning" the chairman of the finance committee and his colleagues. One budget meeting must be open for the public according to law. This meeting was held on December 26. At that time, Professor Nelson B. Henry, of the University of Chicago School of Education, delivered a report for the superintendent's advisory committee. In his report, Dr. Henry urged the addition of ten items to the 1931 budget, in order to increase the efficiency of the Chicago public-school system. He urged that 200 additional elementary-school teachers be employed so that the average class size might be reduced from 46 to 45 throughout the city, at an expenditure of $300,000. He proposed a bureau of research under the direction of the superintendent, and urged that 75 gymnasiums be opened 100 nights throughout the year, for community use without charge to the public. There were seven other recommendations. Dr. Henry was asked how these items, totaling $587,000, could be placed in the budget without violating the law relative to a balanced budget, that is, no appropriations beyond the estimated amount of revenue for the year. He pointed out that the auditor had estimated a 10-per-cent loss in the collection of taxes, whereas the city comptroller estimated only 9 per cent. If the board of education's estimate were made 9 per cent instead of 10 per cent, there would be $565,000 more to use for appropriation purposes.

Dr. Henry went much further in his interviews with the press. He practically charged the trustees with neglect of the educational department. He cited figures showing that, in the 10 largest cities, 77 per cent of the annual expenditures are for instruction, and 23 per cent for other services as operation, maintenance, and so forth; but in the 1931 tentative budget, there is provision for only 67 per cent of the expenditures on instruction, and 33 per cent for other services. He added that this condition had continued over a period of years, but is gradually getting worse.

The Chicago board of education has taken two steps to help relieve the unemployment of teachers. There are approximately 2,000 young girls, graduates of the Normal College and holding certificates, without positions. Many of them have received employment since the board of education adopted a rule that day-school teachers may not teach in night schools, and that married women with husbands employed, may not be appointed unless civil service or teacher-tenure rules require it. Of course, there is friction in getting these rules under way. Supplanting an established corps of older, trained, and experienced night-school teachers with inexperienced young girls who must teach adults to a considerable extent, is no easy matter, and there has been a dropping off in night-school attendance.

The first reaction of most people to the following data is to challenge their accuracy, but there is no denying them:

Year	*Chicago Birth Rate per 1000 of population*	*Chicago Public-School Membership in Grades 1–6*	*Estimated City Population*
1913	24.0		
1914	23.6		
1915	23.2		
1916	22.7		
1917	22.3		
1918	21.8		
1919	21.4		
1920	20.9		
1921	20.3		
1922	20.0		
1923	19.4		
1924	20.0	260,872	2,940,656[1]
1925	19.9	258,918	2,967,497[1]
1926	19.7	258,443	3,058,900[1]
1927	19.6	258,710	3,120,000[1]
1928	18.7	256,396	3,150,000[1]
1929	18.4	254,666	3,215,000[1]
1930		253,735	3,373,329[2]
Change in six years:		7,137 LOSS	433,096 GAIN

[1]While called estimates, these figures are known to be very accurate.

[2]Actual census figure.

THE GROWTH OF SCHOOL ENROLLMENT IN NEW JERSEY

The state education department of New Jersey has compiled data showing the increase in school enrollment in the state from 1899–1900 up to the present time. During this period of thirty years, the total enrollment increased from 322,575 pupils in 1899–1900, to 785,225 pupils in 1929–30. During the period there was an increase of 462,650 pupils, or 143.4 per cent. The largest increase in enrollment occurred in the high schools (grades 9–12), which was 14,397 pupils in 1899–1900 and 113,142 pupils in 1929–30. This was an increase of 98,745 pupils, or 685.9 per cent during a thirty-year period.

During this period, the total rural-school enrollment decreased from 42,074 pupils in 1912–13, to 19,807 pupils in 1929–30, or a decrease of 22,267 pupils, or 52.9 per cent. The total enrollment in one-room rural schools decreased from 26,836 pupils in 1912–13, to 9,272 in 1929–30. This was a decrease of 17,564, or 65.4 per cent.

The enrollment in grades one to four inclusive increased from 219,873 pupils in 1899–1900, to 348,158 pupils in 1929–30. This was an increase of 128,285 pupils, or 58.3 per cent. The enrollment for grades five to eight inclusive showed a steady growth from 1899–1900 to and including 1929–30, with the exception of the school years 1901–02, 1909–10, and 1912–13. The total enrollment in these grades increased from 88,305 pupils in 1899–1900, to 267,534 pupils in 1929–30. This was an increase of 179,229 pupils, or 203.0 per cent during the thirty-year period. The larger increase in the enrollment in grades five to eight inclusive, as compared with the increase in grades one to four, inclusive, showed that the school system of the state had a greater holding power than formerly. This was also indicated by the large per-cent increase in the high-school enrollment.

The enrollment in the miscellaneous group, including the subnormal, the anemic, the backward and incorrigible, the blind, deaf, and other special classes increased from 1,676 pupils in 1912–13, to 7,894 pupils in 1929–30, which was an increase of 6,218 pupils, or 371.0 per cent.

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School-Building-Construction Economies

Geo. F. Womrath, Minneapolis

(Continued from November, 1930)

38. *Is it going beyond reasonable economics to leave the plaster off of all tile walls on the inside of school buildings and paint the tile?*

An unplastered tile surface, though painted, is crude and rough and unsightly for a classroom. In industrial rooms, however, the environment should approximate as nearly as possible the conditions which prevail in industry. It is not objectionable, therefore, to leave the tile walls in these rooms unplastered, but painted, as this adds to their industrial "atmosphere."

39. *Lighting of corridors by means of glass panels in corridor walls.*

This construction undoubtedly saves a large part of the cost of operation, since less artificial light has to be used to illuminate the corridors. The objections raised against this means of borrowing natural light from the classrooms are:

A paneled wall is not as fireproof as a solid wall.

A paneled wall lessens the flat-wall space in both the classroom and the corridor for the hanging of pictures.

A glazed paneled wall requires more janitorial service to wash the glass.

40. *Wood strips and common coat hooks might be used instead of wardrobe poles and brackets. Which shall be specified?*

Common coat hooks prevent clothing from being hung free from the wall; prevent free circulation of air through the clothing hung upon them; and prevent ventilation of damp and wet clothing, which does not dry during school hours and becomes foul smelling.

Wet clothing hung on hooks attached to poles suspended on angle brackets is easily ventilated and dried. Wardrobe fixtures of this type provide a satisfactory and sanitary method of caring for the clothing of school children. Sectional brackets should be used so that the poles and hangers can be adjusted and changed without removing the brackets from the wall.

41. *Should a glazed classroom door be used?*

If a solid door is used, approximately $30 per door is saved, but the corridors will be dark; inspection of classrooms from the corridor without entering the rooms is impossible; and more artificial light will have to be burned to illuminate the corridors.

An argument against the use of glazed classroom doors is that the pupils are distracted and disturbed whenever anyone passes the door. However, it has been conclusively demonstrated that children soon become accustomed to this situation and are not at all distracted by what takes place in the corridor.

42. *Picture molding might be omitted.*

Much damage is often done to the walls of schoolhouses when hooks for pictures are indiscriminately driven into the walls. When the pictures are moved and the hooks pulled out of the walls, the plaster is badly broken.

Picture molding should be furnished throughout the building wherever pictures can be hung, and no pictures should be hung except from this molding. Should the need arise to hang excessively heavy pictures they should be handled and hung only by experts who thoroughly understand the insertion of wall plugs and the application of expansion bolts and hooks.

43. *What provision should be made for the hanging of display work, maps, and charts?*

A large maintenance expense is introduced in schoolhouses when classroom display work, small sheet pictures, maps, and charts are fastened to or hung from the wood trim and walls with stickers, pins, tacks, and nails.

Maps and charts should be purchased with the rings the same distance apart. The rings on old maps and charts should be changed so as to be equidistant. Then two permanent hooks can be screwed into the blackboard molding and used for all maps and charts.

Two tightly stretched wires above the blackboard molding and one wire below the chalk rail provides ample means for the display of classroom work, small sheet pictures, and other display material without the use of pins, tacks, or stickers.

A better means for hanging display work, maps, and charts, is to attach McQuarrie rail to the blackboard molding.

44. *Shall bulletin boards be left out of classrooms?*

If bulletin boards are omitted, other and less satisfactory means must be provided for the display of notices and other material. The general practice is to pin or tack these notices and materials to the woodwork, which soon becomes marred and pinholed, so that repair charges rapidly accumulate.

One-fourth-in. cork carpet for bulletin boards is a satisfactory material to use and costs 16 cents per square foot.

45. *Are adjustable blackboards practical?*

A large part of the blackboard surface in classrooms is seldom used. Tall pupils do not write upon the lower part of the surface and short pupils do not write upon the upper surface. Narrow blackboards, adjustable to height from the floor, to meet the requirements of pupils of different heights in the different grades, save a large part of the present investment in wide blackboards.

The teacher's end of every classroom should be fitted with a full width 48-in. blackboard for classroom problem work.

Strips of keyhole metal, properly spaced and fastened to the wall are satisfactory for adjustable blackboards. The blackboards are surrounded with a wood frame. Square-head bolts are screwed into the back of the frame. These bolt heads fit into the circle-opening of the keyhole metal strips and slip down into the restricted part of the keyhole. The weight of the blackboard automatically tightly clamps the frames and holds the blackboard steady and solid at any height at which it is hung. When adjustable blackboards are installed, changes in the height of the blackboards are easily made whenever a change is desirable to meet any variation in height of pupils using the room. Thus, classrooms need not be restricted to the grade of pupils for which they were originally equipped.

(To Be Concluded)

COMPENSATION FOR JANITORIAL-ENGINEERING SERVICE

(Continued from Page 63)

side" should be stopped. This may require that boards of education increase the amount of remuneration paid janitor-engineers.

Service and Costs

Periods of Employment. Janitor-engineers are, in the main, employed on a twelve-months' basis. There are reasons why this is a desirable practice. Some of these reasons are: The janitor is needed the year around, for (1) summer cleaning is now recognized as an important part of the work. (2) They are needed to make repairs during the summer. (3) The trees, grass, shrubs, and other plantings on the average school site should be developed to the extent that they require care throughout the entire summer. (4) The type of man necessary for the important position of school janitor-engineer cannot be secured on a part-time basis without paying him what the average school board would consider exorbitant wages for the time during which he would be employed. To secure and hold good janitor-engineers they must be employed for the entire year. This is the almost universal practice in progressive school systems. Good men are being employed for the entire year, most of all, because they are needed.

FRANK A. JENSEN
Superintendent of Schools,
Rockford, Illinois

Mr. Jensen was recently reëlected for a new term of three years as superintendent of schools at Rockford, at a salary of $10,000, $10,500, and $11,000, respectively.

Previous to coming to Rockford eight years ago, Mr. Jensen was superintendent for three years at Kalkaska, three years at Hart, and nine years at Benton Harbor, Michigan. He is a graduate of the Michigan Normal College, and holds degrees given by Columbia and Michigan Universities.

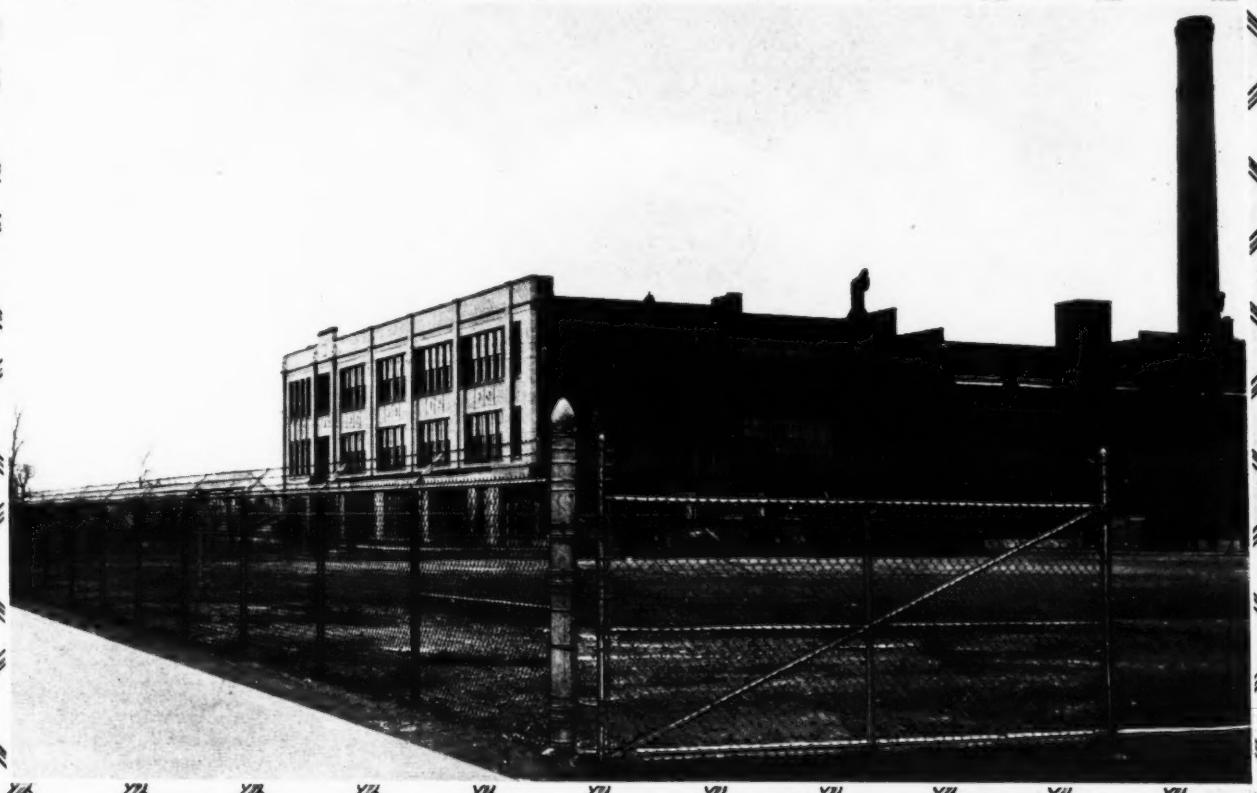
Bases for Making Assignments and Determining Service Costs for Buildings. Service loads for janitor-engineers are usually determined upon the basis of the number of square feet of floor area and ground area, the number of cubic feet in a building, the number of class-

(Continued on Page 110)

TABLE I. The Number and Per Cent of 573 School Systems Which Utilized 22 Important Factors in Determining Compensation of Janitors

Factors	Number of Cities where Factors are Used Alone	In Combination	Total	Per Cent of 573 Cities*
1. Administration of building	0	0	0	00.0
2. Size of building	346	78	424	74.0
3. Age and state of repair of building	0	3	3	00.5
4. Location of building	0	0	0	00.0
5. Climatic conditions	0	0	0	00.0
6. Type of building	0	3	3	00.5
7. Kind of school	0	0	0	00.0
8. Social background of pupils	0	0	0	00.0
9. Enrollment	11	1	12	02.1
10. Type of rooms	0	2	2	00.3
11. Amount and kind of floor area	19	24	43	07.5
12. Area and location of windows	0	8	8	01.4
13. Area, kind, and utilization of blackboards	0	0	0	00.0
14. Type and arrangement of furniture	0	0	0	00.0
15. Size of site, playground covering, and gardening	0	60	60	10.5
16. Area and placement of sidewalks	0	4	4	00.7
17. Type and condition of heating equipment	0	50	50	08.7
18. Type and condition of ventilating equipment	0	0	0	00.0
19. Amount and installation of plumbing	0	0	0	00.0
20. Presence, type, and condition of service systems	0	1	1	00.2
21. Janitors' shop and storeroom	0	0	0	00.0
22. Cleaning equipment (No basis)	0	0	0	00.0
	95	0	95	16.6

*Since some systems use more than one basis, these percentages will total more than 100.



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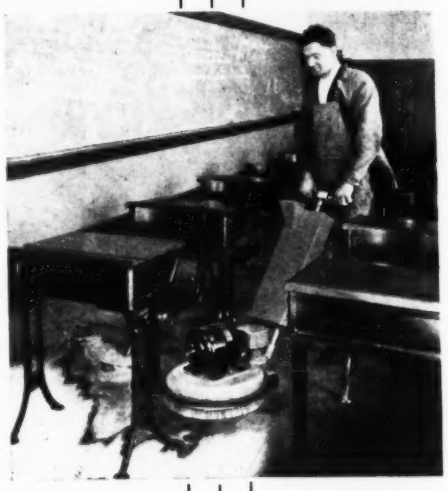

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(Continued from Page 108)

rooms, or the number of pupils in attendance. Sometimes some combination of two or more of these factors is used. While each of these factors is important in determining the service load of a particular building, they are not the only important determinants.[5]

A list of the determinants of the service load of particular buildings is shown in Table I. The data of Table I are adapted from Garber.[6] They give the basis or bases for determining salaries of janitors in 573 city school systems in 1919, according to statements of superintendents of schools.

Table I shows that 95, or 16.6 per cent of the cities from which reports were received, used no factor at all for determining the compensation of janitor-engineers. Furthermore, 10 of the 22 more important factors, which materially affect janitorial-engineering service, were totally ignored in all of the 573 cities. Size of building, including number of rooms, is the one factor which enters to the greatest extent into the determination of janitorial-engineering compensation. Size of building certainly is an important factor, but just as certainly it is not the only factor that should receive consideration. It seems reasonably safe to conclude that up to the present time most plans, now in use, for establishing bases upon which assignments are made and amounts of service and service costs determined, ignore most of the important factors which should be taken into account. Tested by the 22 factors listed in the foregoing, it can be seen that the best schedules yet devised fall far short of a perfect scheme.

Salary Schedules for Janitor-Engineers. While service loads for janitor-engineers should be determined, and the amount of service for each building should be provided upon the basis of such determination, that, in itself, does not constitute a salary schedule for janitor-engineers, though it may determine the salary cost for a particular building. A salary schedule for janitor-engineers will take into account such factors as are used in constructing teachers' salary schedules. It will provide increases for such factors as experience, training, merit, and degree of responsibility.[7]

[5]For a discussion of other factors that help determine the service load of a building and should help to determine the cost of service, see Reeves, C. E. and Ganders, H. S., *School Building Management*, pp. 27–31. Published by The Bureau of Publications, Teachers College, Columbia University, New York.

[6]Garber, J. A., *The School Janitor*, p. 11.

[7]See Reeves, C. E. and Ganders, H. S., *School Building Management*, pp. 31–2.

SCHOOL BOARD AND ITS FUNCTION

The state educational department of South Dakota, under the direction of E. C. Griffen, state superintendent, has issued an administrative handbook. In discussing the place which a board of education holds in the educational scheme it says:

"The people of a school district delegated to the board of education the responsibility for the public schools which the legislature has placed upon them. Thus the board of education is the supreme authority in the management of the local schools."

In outlining the legislative and judicial powers of boards of education the following outline is provided.

"1. The chief function of a board of education is legislative. The board of education must establish the policies which are to govern the administration of the educational system maintained by the school district.

"2. The board also has judicial powers and is a court of final appeal whenever differences arise between workers within the school or between citizens and the school officials.

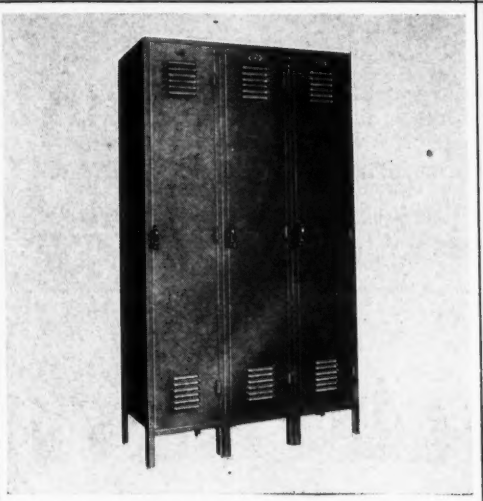
"3. A board of education is not an executive body. In fact, one of the most important duties of the board is to select a superintendent of schools who, in turn, should be the executive officer of the board. The responsibility for the administration of the schools should be intrusted to the superintendent."

In discussing the board of education as a constructive factor in the development of schools the handbook says:

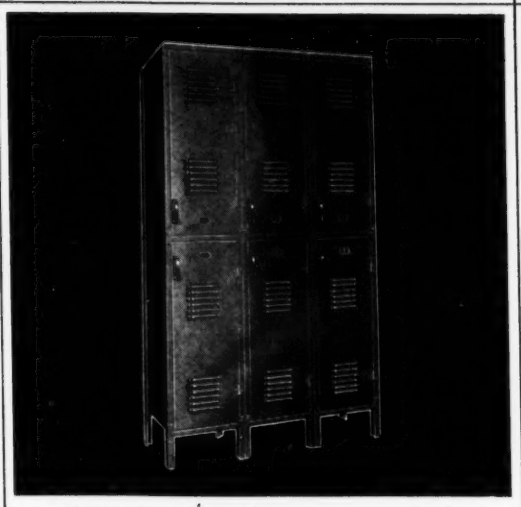
"In association with competent educational leadership the board of education should be a constructive force in the development of schools. The superintendent of schools should be in position to present to the board an educational program based on sound principles. The board, in turn, knowing the local situation, should be in a position to decide whether the program recommended is the most satisfactory one for the schools from the lay point of view. It is absurd for a school board to attempt to administer the educational program without professional guidance and leadership. It is equally absurd for superintendents, principals, and teachers to assume that public schools can be more efficiently managed without a representative board of education."

♦ Indianapolis, Ind. The school board ended the school year with a cash balance of $371,275, as compared with $49,678 last year, according to a report submitted by Mr. A. B. Good, business director of the schools. The board inaugurated a building program of $671,000, all of which was started during the year, and part of which was completed.

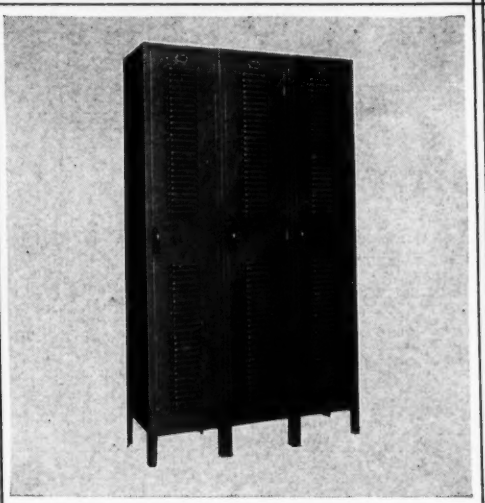
♦ Madison, Wis. The school board has proposed the suspension of the schedule of teachers' salary increases, because of the depression and a $50,000 reduction in the 1931 budget. The new budget for the school year totals $1,044,000, which is a reduction of about $97,000 from that amount originally asked by the board.



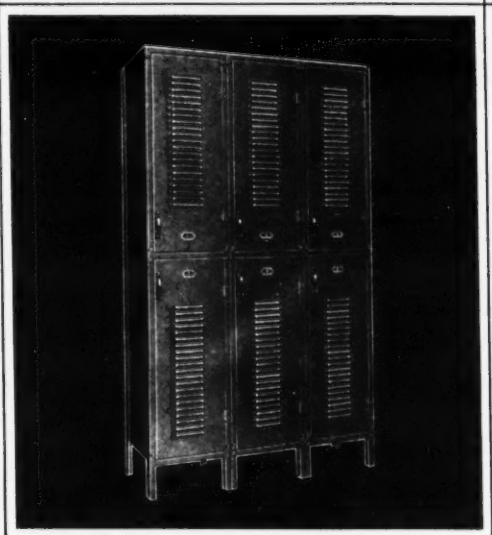
Single-tier standard louver—the most popular general purpose locker.



Double-tier standard louver—a very desirable locker where space is limited.

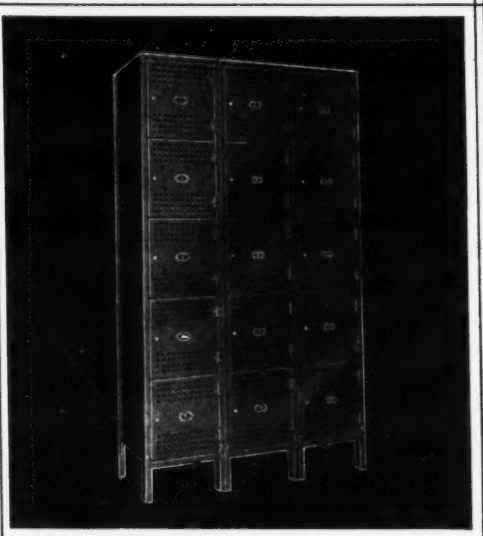


Single-tier full louver locker—for use where an extra amount of ventilation is desired.



Double-tier full louver locker—most widely used in gymnasiums.

Combination locker—designed for six pupils yet takes the space of only two full length lockers.



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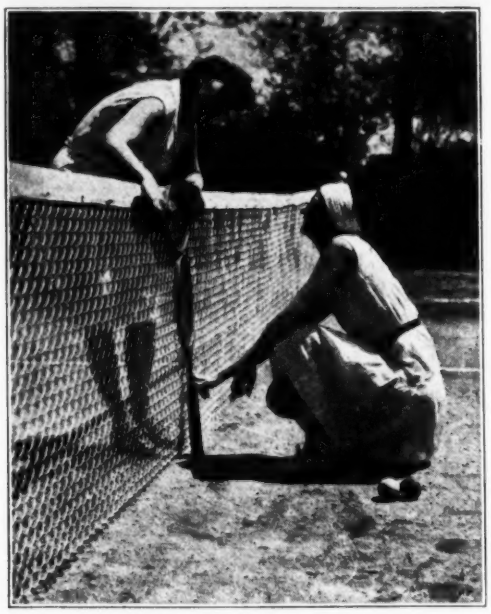

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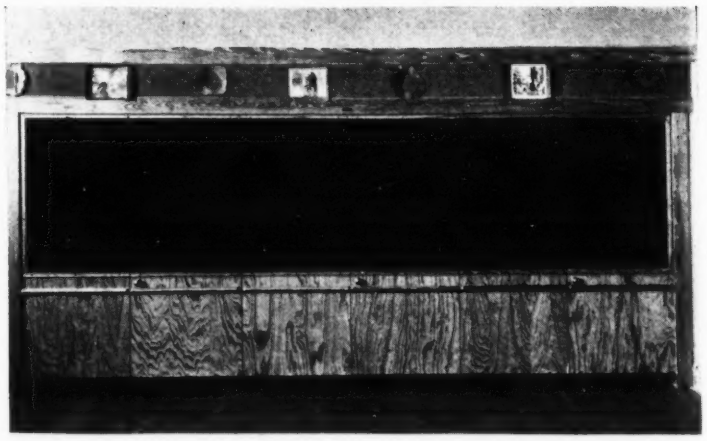

Flush door, with slate blackboard and chalk rails, wardrobes in the new Garden Street School, Stratford, Conn. Wardrobes designed by John T. Fairhurst, F. H. Beckwith, *Architect*.

This shows the three wardrobes open. Blackboards fully protected. Bins on shelves provided in accordance with specifications for this particular job. (Where blackboards are used on wardrobe doors, latches are provided to hold doors firm.)

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Disappearing doors leave aisle clear. Full width opening provides easy access to hooks. Doors are rigid when closed. No track or slot on floor to collect dust. No obstructions to trip over. All wardrobes furnished complete, including hooks or hangers. Operating hardware is rugged and simple. Sagging of floors or other settling of building does not affect the operation of the doors in any way.

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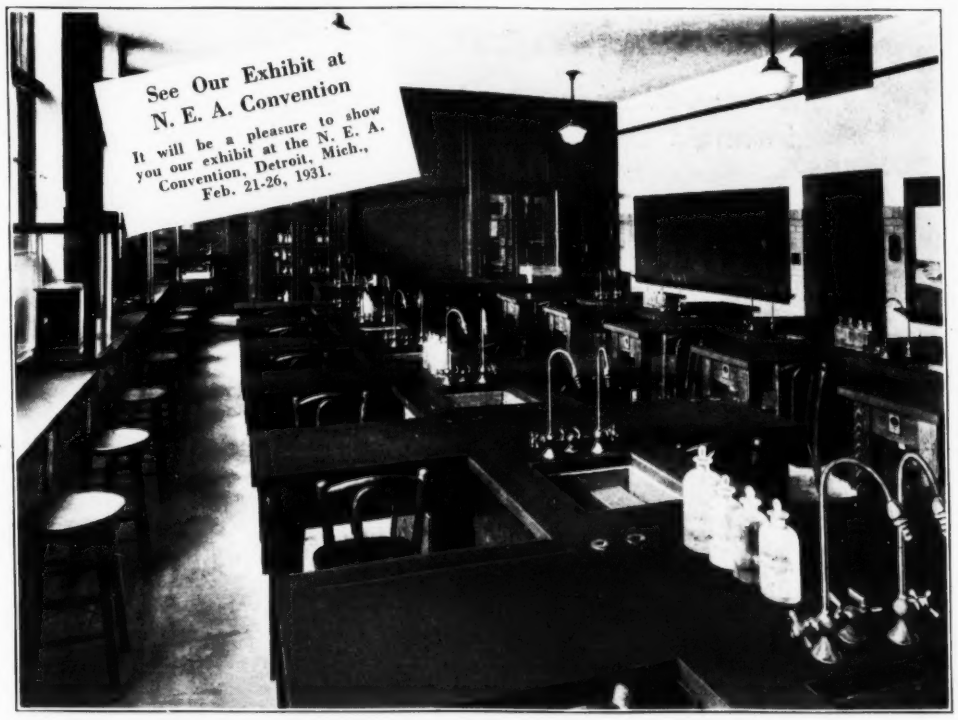
Lincoln Science Desks
Enlarge Laboratory Classes

If you have crowded classes—if you are seriously thinking of building an addition to your school, first check up on laboratory classrooms. See if they are used every period—see how many students are in each class—see if a special lecture room is needed in addition to the laboratory experimental room. Write Kewaunee, giving the size of your laboratory, and we will tell you how many students should be accommodated in each class. We will show you how Lincoln Science Desks eliminate the need for extra lecture rooms and how these new space-saving, time-saving desks accommodate more pupils conveniently and make possible better teaching conditions.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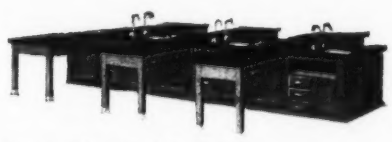
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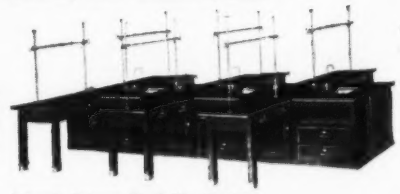
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WASHINGTON CORRESPONDENCE

A. C. Monahan, Formerly U. S. Bureau of Education

Money for School Sites Released by President Hoover

The chairman of the appropriations committee of the house of representatives, R. J. Simmons of Nebraska, has an agreement, permitting the immediate use of funds for school sites by the District of Columbia as soon as the President approves the District appropriation bill for the fiscal year beginning July 1. This will permit earlier action on the school-building program as architects' plans for the new building cannot be made until sites are selected.

The new policy makes a large part of the appropriations available by March 4 every other year. In the intervening years, it means that the district commissioners could negotiate with the funds anywhere from two weeks to two months earlier than they can under the present policy. So far as public-school business is concerned, the new policy would enable the engineer commissioner, who purchases sites for public schools, to launch his negotiations for land purchases at a date which would enable the completion of the construction of the building itself, earlier in a school vacation period, and permit occupation of the buildings a whole term ahead of the present schedule. Too often, new schoolhouses become available for occupancy in the middle of a term, and the complete structure lies unused for one or two months, awaiting the beginning of the next semester. With the earlier acquisition of sites, however, the chance of avoiding this situation is increased.

Community Chest and Public Schools

The board of education of the District of Columbia schools has reversed all previous stands in regard to soliciting money in the schools under its charge, by granting consent to the community-chest drive to enter the schools. The increased demands for funds this year for charitable circles is responsible. The board has approved the following proposals:

1. That mass meetings be held at each school in the District, at which the aims and purposes of the chest drive would be outlined.
2. That chest posters be placed in each school, and that each building be equipped with a chart indicating daily progress.
3. That places be established in the teachers' colleges and high schools, in which contributions may be made by students and faculty.
4. That stations be established in each elementary school where contributions may be made, or in lieu of this, that "mite boxes" be placed in conspicuous positions.
5. That each student in the city who makes a contribution of any amount be given a community-chest button.

Advisory Committee for National Survey of Secondary Education

An advisory committee of 56 prominent men and women not in educational work, has been appointed by the Secretary of the Interior, in connection with the National Survey of Secondary Schools, now under way. The membership of the committee which is drawn from all states of the Union is representative of a wide variety of interests and vocations. The function of the committee is to make recommendations to the survey committee, and to review the findings of the staff. Opportunity will be given the members to advise upon important procedures while they are still provisional and to react to the report while it is in tentative form. At the close of the survey there will be in every state some prominent and able person, not professionally engaged in education, whose acquaintance with the findings makes it possible for him to interpret the survey to the taxpayer and to the general public.

The following members of the committee are well known to schoolmen throughout the country because of previous activity in educational matters:

Jane Addams, Hull House, Chicago, Ill.; Roger W. Babson, Babson Park, Fla.; H. Fletcher Brown, DuPont Building, Wilmington, Del.; A. Lincoln Filene, 246 Washington St., Boston, Mass.; John H. Finley, New York Times, New York City; Henry J. Haskell, Kansas City Star, Kansas City, Mo.; Jerome Jones, Journal of Labor, Atlanta, Ga.; William S. Kenyon, Judge, U. S. Circuit Court, Fort Dodge, Iowa; Harry R. Lewis, Commissioner of Agriculture, Providence, R. I.; David Littlejohn, State Health Department, Charleston, W. Va.; John E. Martineau, Judge, U. S. Circuit Court, Little Rock, Ark.; Charles H. Mayo, Rochester, Minn.; Mrs. J. K. Pettingill, 426 West Saginaw St., Lansing, Mich.; Wm. Allen White, The Emporia Gazette, Emporia, Kans.; Matthew Woll, 210, American Federation of Labor Building, Washington, D. C.

Questionnaire to 850,000 Public-School Teachers

The National Survey of the Education of Teachers, now under way, is sending a questionnaire to each of the approximately 850,000 public-school teachers in the United States. The questionnaire asks each teacher for the following information; description of work, class in school, number of teachers in same building, other school responsibilities, training, sex, marital status, type of community, experience, employment, salary, degrees, semester credits earned, if new in school, where from, and teaching load.

Distribution is being made through the state superintendents of education, who, in turn, will use county and city superintendents. Educational authorities worked over the questionnaire for four months before it was released to the printer. They reduced it to the minimum of questions, and clarified it for answering. Proof copies were used with trial groups of teachers as a final check before printed copies went out in January.

In addition to definite data on teacher-supply and demand, the National Survey of the Education of Teachers is expected to reveal how well qualified American teachers are for their work, according to the variety of work and variety of community, and for the various states.

Dr. E. S. Evenden, associate director of the survey, says, "One of the hoped-for results to be obtained from this supply and demand questionnaire will be its value to state educational leaders as a guide to school legislation which, by the very

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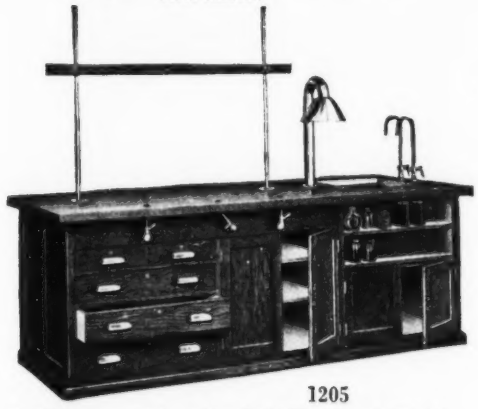
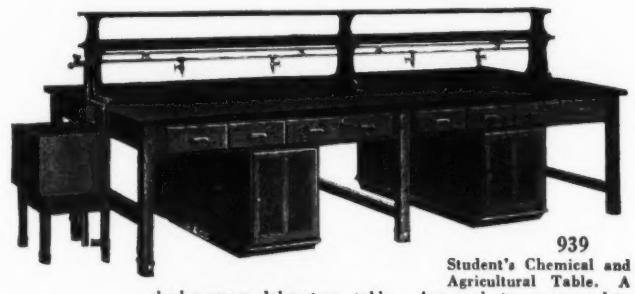
Student's Biology Table. A double-duty Laboratory and recitation table used where it is preferable to have the students face one way.



1205
A dual-purpose table serving both Physics and Chemistry instruction. Ample drawer and cupboard space. Two compartments in rear for tubing, etc.



939
Student's Chemical and Agricultural Table. A dual-purpose laboratory table. Arranged to accommodate sixteen students. Open space below provides knee room when seats are used.

nature of the present situation, during the next five years, will be larger in amount and more far-reaching in results than during any similar period in history.

"School administrators and state legislators, during this critical period of readjustment and increasing standards, will be vitally concerned with three large phases of the problem. In the first place, what measures should be adopted to maintain and increase the scope and efficiency of the public schools at this time? In the second place, what can be done to care for the present unemployed teachers in order to prevent individual suffering and loss of professional morale? In the third place, what measures can be taken to prevent the recurrence of these conditions?"

School Enrollment in 1930

According to an estimate based on the latest available statistics, collected by the Federal Office of Education, the enrollment in elementary schools for the year 1930 was approximately 21,370,000. The number of pupils enrolled in public high schools was 4,030,000. The number of teachers in both was 848,500; the number of schoolhouses, 254,200. School expenditures totaled $2,289,000,000. The number of pupils enrolled in private and parochial schools, elementary and secondary, totalled 2,704,000. The declining birth rate in the United States is being felt in the schools. In an average group of 200 Americans in 1914, five children were being born each year. In that same average group 1928, less than four children were being born, according to statistical studies made by the Office of Education.

More than 421,000 teachers, or about 45 per cent of the nation's combined administrative, instructional, and supervisory staffs of public elementary and secondary schools, took special courses last summer, according to a survey made by the National Education Association.

More than a million persons, young and old, were enrolled in vocational schools in 1930, including 170,000 who were learning to farm better; 250,000 to make better homes; and 625,000 to do some specific job better in trade and industry, according to the report of the Federal Board of Vocational Education. This enrollment was largely in schools which received aid under the terms of the national vocational-education law.

Changing social conditions following the post-war period have presented varied and complicated problems in Negro education. In spite of the large exodus of Negroes to northern cities, serious problems still exist in southern states. Compilations made in the Federal Office of Education during the year indicate that percentages of enrollment in thirteen southern States are 69.3 among Negroes, as compared with 83.8 among whites; that percentages of the two races in public high schools are 2.6 and 11.5, respectively, and that the average annual term is 18 days shorter in Negro than in white schools.

Increasing attention was given during the past year to the education of subnormal and abnormal children — in the United States. A survey of the field shows that there are 736 cities with a population of more than 10,000, which now have special classes and schools to reach those children deviating from average capacity.

Military Training in High Schools Curtailed

Military training under U. S. Army officers, in high schools throughout the country, may be curtailed under a recent recommendation of the war department, in the war department appropriation bill for the coming year. It asks for money for salaries for 101 such officers, instead of the 149 now provided, which means a decrease of 48 in the number of officers now available for high-school military departments.

♦ Senator Fess, of Ohio, has introduced a bill in Congress, providing for the reservation of 15 per cent of the broadcasting facilities available to the nation for educational purposes. The bill, which conforms with the recommendations of the advisory committee on educational radio, provides that these facilities may be awarded only to properly accredited educational agencies of the federal and state governments, and to educational institutions chartered by the United States.

The bill in its provisions constitutes one of the major objectives of the committee on education by radio, and it will have the effect of protecting the educators in broadcasting their programs. It will end the irritation between the educational and the commercial broadcasters.

PERSONAL NEWS OF OFFICIALS

♦ The school board of Fitchburg, Mass., has reorganized, with the reëlection of MR. JAMES M. MCNAMARA as president, and MR. D. B. NEVILLE as vice-president.

♦ MR. JAMES P. KEITH has been reëlected as president of the school board of Brockton, Mass. MISS ABBIE O. DELANO was reëlected as secretary for a 21st consecutive term.

♦ The school board of Malden, Mass., has reëlected MR. W. M. BAILEY as president. DR. F. W. GAY was elected as a new member of the board, to succeed Mrs. C. H. Staples.

♦ DR. SAMUEL E. FLETCHER has been reëlected president, and MR. W. T. MCNEIL vice-president, of the school board of Chicopee, Mass.

♦ MR. JOHN R. JOYCE has been reëlected president of the school board of Woburn, Mass.

♦ The school board of Attleboro, Mass., has been reorganized, with the reëlection of MR. E. A. THAYER as president, and DR. R. P. DAKIN as secretary.

♦ MR. WALTER J. COOKSON has been reëlected president of the school board of Worcester, Mass.

♦ The school board of Troy, Ohio, has reorganized, with the reëlection of DR. G. E. MCCULLOUGH as vice-president, and MR. WALTER H. COLES as president.

♦ The school board of Bellaire, Ohio, has reëlected MR. H. P. RODEWIG as president. MR. W. J. MCGRAW has been elected as vice-president, and MR. K. G. COOPER as clerk.

♦ The school board of Marietta, Ohio, has reorganized, with the reëlection of MR. E. B. STRECKER as president, MR. O. C. DUNN as vice-president, and MR. W. M. SCOTT as clerk of the board.

♦ The school board of Bluffton, Ohio, has reorganized, with the reëlection of MR. NOAH BASINGER as president, MR. L. T. GREDING as vice-president, and MR. A. D. HALL as clerk.

♦ The school board of Lancaster, Ohio, has reorganized, with the reëlection of MR. W. H. STUCKEY as president, MR. P. D. TURNER as vice-president, and MR. T. L. HEWETSON as clerk.

♦ The school board of Piqua, Ohio, has reorganized, with the reëlection of MR. GEORGE WASHING as president, MR. W. H. KOESTER as vice-president, and MR. F. P. BROTHERTON as clerk.

♦ The school board of New Lexington, Ohio, has reorganized, with the reëlection of MR. J. E. EVANS as president, MR. W. E. PLETCHER as vice-president, and MR. C. R. RIDENOUR, as clerk.

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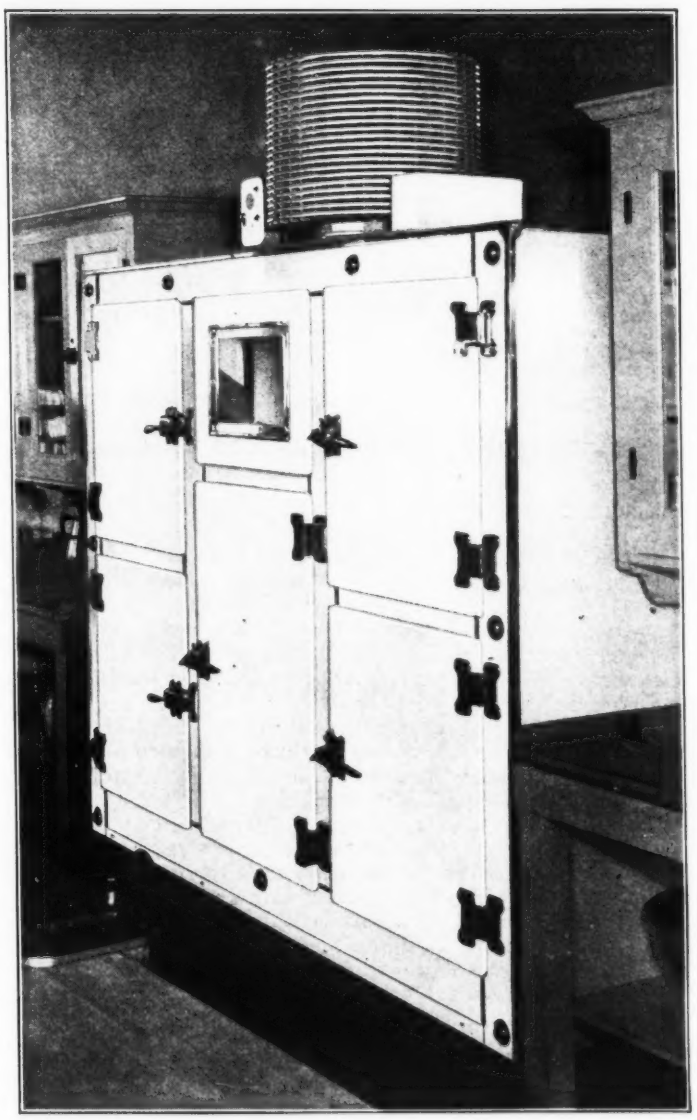

Grosse Pointe (Michigan) High School is another of the modern institutions using General Electric Refrigeration. One of the models is illustrated. Water Coolers are also in use.

FROM Indiana University, Miss Alice Nelson, Director of Halls and Commons, writes, "The University has installed General Electric Refrigerators and drinking fountains . . . As a result our food is in better condition . . . The flavors are kept more distinct . . . The food presents a more palatable appearance . . . The cabinets are very easy to keep clean . . . In our General Electric C 450 the cost for the month of May was $6.55 while refrigeration for the same month last year was $40.50".

THAT REPRESENTS AN 84% REDUCTION IN OPERATING COST ALONE, a characteristic saving made possible by the simple, extremely reliable, current-saving mechanism in the General Electric Monitor Top—hermetically sealed—self-oiled—permanently quiet—virtually attention-free. Additional savings result from the elimination of food spoilage, and a more efficient commissary throughout.

Similar experience is common in educational institutions of all types. Invariably they report those gratifying economies and service improvements which denote able, progressive management.

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4. Combination Science Table
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Laboratory, Home Economics, Vocational Furniture

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SCHOOL ADMINISTRATION NOTES

CINCINNATI ORGANIZES RELIEF FOR SCHOOL CHILDREN

Supt. Edward Roberts, of Cincinnati, Ohio, recently presented a report to the board of education on the organization of relief service for pupils in the schools. Responsibility for all relief measures affecting school children has been placed upon Miss Campbell, director of the vocation bureau, with Mr. Fogle, chief attendance officer, acting as the representative of the superintendent's office in dealing with the situation and in coöperating with the various agencies engaged in relief service in the community. Miss Campbell is the administrative agent of the relief fund provided in the financial program of the board of education, by means of which needs of individual pupils are handled through the vocation bureau, and the attendance department, in coöperation with the associated charities. The associated charities of the city assigned five workers to care for school-relief problems, in order to provide the relief as quickly as possible.

Assistance was received through the department of public welfare in the form of orders for shoes. These were distributed to principals upon request by the attendance office, and were honored at a downtown shoe company upon application of the individual. When necessary, pupils were called for at the school and transported to the store by a group of volunteer women.

Clothing was collected by pupils in the various schools, under the direction of the principals and with the assistance of the parent-teacher associations, and delivered to downtown schools for distribution. A clothing exchange was established and provisions made for frequent contacts of suburban sources of supply, particularly in the field for children's clothes. In addition, a supply of clothes at the central relief station was also available for meeting children's needs.

In the matter of food, school luncheons of the city made certain that no children were hungry and cared for needy cases wherever necessary. In a few downtown schools, with no lunchrooms, a temporary arrangement was made to provide food for children. Through the welfare department, milk and bread was provided for certain downtown schools, and additional provision of other foods was arranged for.

Principals and teachers in the schools were fully aware of the significance of the situation and were desirous of affording all possible help in the general program of relief. Every effort was made to relate the undertakings of the various schools to the general city-wide program and to maintain a constant and intimate contact with the agencies and with those responsible for the organization and administration of the general coördinated program. In that way, the workers in the schools endeavored to make certain that there was no duplication of effort and that no need would go unrelieved.

SCHOOL RELIEF WORK IN NEW YORK CITY

Mr. John A. Wade, associate superintendent of schools of New York City, in a recent report on the emergency and free-lunch service for needy pupils, calls attention to the fact that the schools have been pledged to the proposition that no school child shall go hungry while in school. To attain this objective, every appropriate source of the schools was mobilized.

In schools having a lunch service operated under the supervision of the homemaking department, the principal, with the approval of the district superintendent, was authorized to furnish daily lunches to needy children to be paid for out of the school relief fund of the district superintendent.

In schools having a concessionary lunch, arrangements were made with the superintendent to furnish lunches to needy children and payment was made out of the school relief fund.

In addition, a milk-and-cracker service was inaugurated by the principals in schools in which such service was needed. Bottled milk from the large milk companies was obtained at 4½ cents per half pint, and was sold to those who could pay at 5 cents. The slight profit was used to pay for wholesome crackers. Milk and crackers for needy children was paid for out of the school relief fund.

In the emergency, the facilities of the homemaking kitchens were used to feed a reasonable number of needy children without demand on the school relief fund.

Principals of schools where hot lunches or milk-and-cracker service were furnished were required to file a report at the end of each week, showing the number of pupils receiving such aid, and the cost of the service for the week. The weekly report was used by the school relief committee in gauging the future needs for the relief work.

THE FUNCTION OF THE ATTENDANCE OFFICER

"There is no argument as to the causes that keep children out of the school," said Charles L. Mosher, director, attendance department, University of New York.

"Families, where poverty and illness and ignorance have made such inroads that there is no power of adjustment to meet the necessities of living and the requirements of law, where it is impossible for the people concerned, must have advice and help, in order that they may give to their children the American chance.

"The peculiar service of the attendance officer comes from the fact that the statute gives him a standing and an authority in the home which no other school officer has or can have. He should and he does, in proportion to his intelligence and very fully if he is a modern officer, coöperate with all of the school service which I have mentioned.

"He coöperates with all of the community services which are available. He is really a director of the process of adjustment. He is a discoverer of the conditions, backed as he is by the power and authority of the law, and having discovered

(Continued on Page 118)

What have *clean hands* to do with education?

Educators know that the problem of supplying proper, adequate washroom facilities is being given more thought than ever before. In fact, it is recognized as part of today's education, involving as it does the basic subjects of child health and the development of sensible habits of personal cleanliness.

Not an easy task providing for this wholesale cleaning up of many pairs of hands each day of the school year! And yet a worthwhile one, in which the new "SF" SANI-DRI is playing an important part. This new drier is helping to bring cleaner hands and permanent sanitation to many schools. Its low cost, trouble-free and mischief-proof drying service has been a revelation to many school executives. Once installed, it offers an always-ready, continuous service not dependent upon the budget. With the introduction of SANI-DRI your school's "No towel" periods will become a thing of the past. washroom service will be speeded up and adequate drying facilities provided at a far lower cost per dry.

Why not get the facts on this better, faster, finer electric drying service for your school? Send for our new booklet "The Airway to Efficiency" which describes in detail the new "SF" Model and its twelve basic betterments.

Electrical Division

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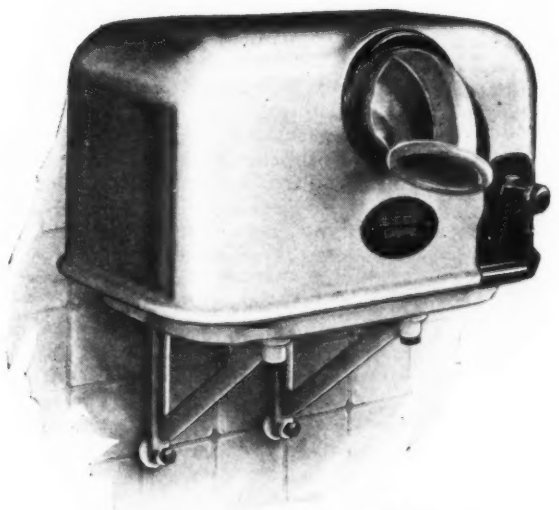
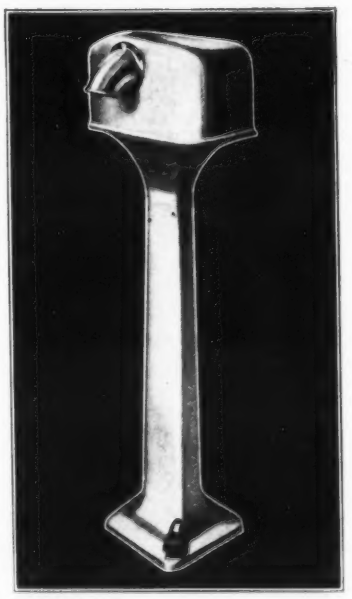


This is the Wall Model of the new "SF" Sani-Dri. It has push button control and automatic cut-off.

The New "SF" SANI-DRI

made in a choice of two models

We can supply the new "SF" SANI-DRI in either wall or pedestal type. Both models are made in sanitary porcelain enamel, as easy to keep clean as a china dish. Each model contains all of the twelve outstanding betterments which make SANI-DRI so efficient and practical for school washroom use.



The Pedestal Model of the new "SF" Sani-Dri is graceful and sightly. Operated by convenient foot pedal.

AN UP-TO-DATE PHYSICS LABORATORY

equipped by Kimball with generous provision for apparatus, note books, etc. Each table has gas and electricity conveniently located for student's use. With all tables facing the lecture desk, at the front of the room, this arrangement is ideal for other science and class room work, when not used by the physics class.

Instructors Desk

No. 680—with locks—wood top No. 680A—with stone top

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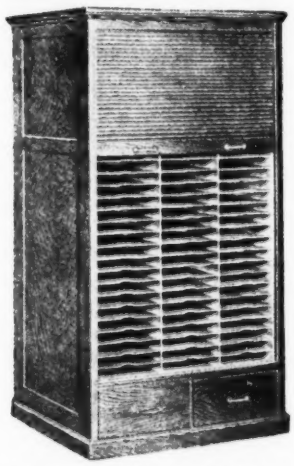

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(Continued from Page 116)

conditions, it is his business so to direct action as to secure effective adjustments.

"The work of the attendance officer needs to be professionalized. He needs the protection of a special and particular license. He should be in a position to prove, for any who inquire, his fitness for social-service adjustment work for the schools in his charge. To meet the requirements of his job as liaison officer he must understand schools, teachers, pupils, parents, service organizations, and courts. For his own protection he should insist upon the establishment of standard qualifications which will fix his status in education beyond question."

ADMINISTRATIVE SCHOOL UNITS IN NORTH CAROLINA

The educational commission of North Carolina, in its recent report, deals with the size of administrative school units and their reduction in number of reorganization. The report offered statistics showing the organization and enrollment of schools for the scholastic year 1929–30.

According to the report, there were 195 independent units in operation in the state during the year, with 100 county systems, and 95 charter or city systems. Of the city systems, there were 66, with an enrollment of less than 2,000 pupils. Of the county systems, there were 7, having enrollments of less than 2,000. Seventeen counties and 5 cities each had an enrollment of more than 10,000 pupils.

According to the present organization, 37.2 per cent of the charter enrollment is in systems having 6,000 pupils or more, 15.3 per cent having 3,000 to 6,000 pupils, 16.5 per cent having from 2,000 to 3,000 pupils, 18.0 per cent having 1,000 to 2,000 pupils, and 13.0 per cent having less than 1,000 enrolled.

It was emphasized that, if the 66 systems having fewer than 2,000 pupils were included in county systems, there would be 64 systems having 6,000 or more pupils enrolled, and 73.5 per cent of the total school enrollment; 39 systems having an enrollment of from 3,000 to 6,000 pupils, and 19.7 per cent of the total enrollment; and 26 systems having fewer than 3,000 pupils enrolled, and 6.8 per cent of the total school enrollment.

FIRE DRILLS FOR SCHOOL CHILDREN

Attention is called in Connecticut to the importance of fire drills in the schools. Oscar S. Fitzsimons, assistant state building inspector, notes the fact that "some schools do not have fire drills. Although a school building may be fireproof and meet all the legal requirements, if this same school should be filled with smoke and the children were not thoroughly under the control of the teacher, they might get excited, start to run and cause a panic. Panic means injured arms, legs and backs, to say nothing of cuts, bruises, etc." He then suggests that,

"a successful fire drill is one where the children are so well trained that even fire will not cause them to break ranks or to show panic.

"The teacher should be the last to leave the classroom, and after seeing that all the pupils are out of the room should follow out of doors and to safety.

"Two ways should be provided for exit from a school, if possible, so that if one way is blocked by fire or smoke, the other way can be used and distinct signals should be arranged so the children will know at the sound of the gong which way they are to go.

"Frequent fire drills are the only way to have your children ready, if trouble comes."

VALUE OF HOME STUDY

The organized thought of the world is recorded in books; these constitute the epitomized depositories of racial experience. It is from these sources that the material of instruction and practice is largely drawn and the teacher, as a guide, plays the important role of giving the formal presentation of the book an attractive setting to make the assimilation of content by the learner, pleasant and effective. As the pupil progresses, he must develop the power to learn by himself and to depend less and less upon the teacher. The efficient teacher becomes dispensable when the pupil or student develops the power to teach himself. Unfortunately, this great power of study is not as generally developed even among mature students as a scheme of effective education should require.—William J. O'Shea, Superintendent, New York City.

SCHOOL AND MUNICIPAL EXPENDITURES IN NEW JERSEY

The state education department of New Jersey has issued a report showing the net school indebtedness and expenditures for school purposes of the various communities of the state.

Forty-four districts in the state had neither school nor municipal indebtedness outstanding. Of this number, 31 were rural districts, and 13 were urban. One hundred and five school districts had no net school indebtedness, of which 61 were rural, and 44 were urban. One hundred twenty-seven had no net municipal indebtedness, of which 1 was a city, 89 were rural, and 37 were urban.

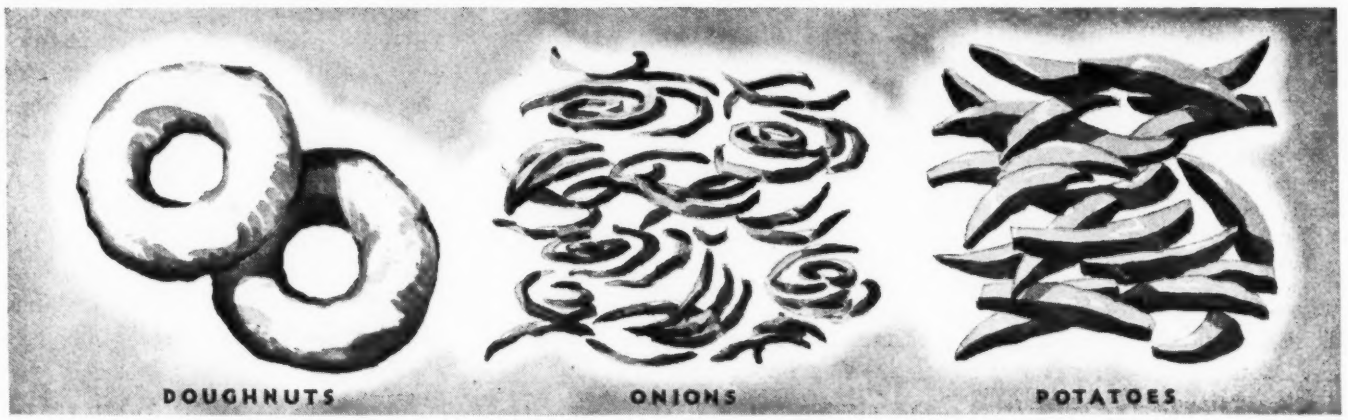
The study showed that the total net school indebtedness of all school districts in the state was $181,567,907 in June, 1929. This was an increase of $7,371,063 over that reported for June 30, 1928. The total indebtedness (school and municipal) was equal to 6.4 per cent of the 1929 state net valuation taxable. This was an increase of .2 per cent over that of the preceding year. Forty-five and seven-tenths per cent of the total net indebtedness was chargeable to schools, and 54.3 per cent to municipal activities other than schools.

In determining the median per cent of total net indebtedness for schools and other municipal purposes, the 44 districts having no net indebtedness, neither school nor municipal, were not considered. The median school district in the state had 56.3 per cent of the total net indebtedness chargeable to schools, and 43.7 per cent to municipal other than schools. The median city district had

(Concluded on Page 120)

NEW *Electric Fry Kettle*

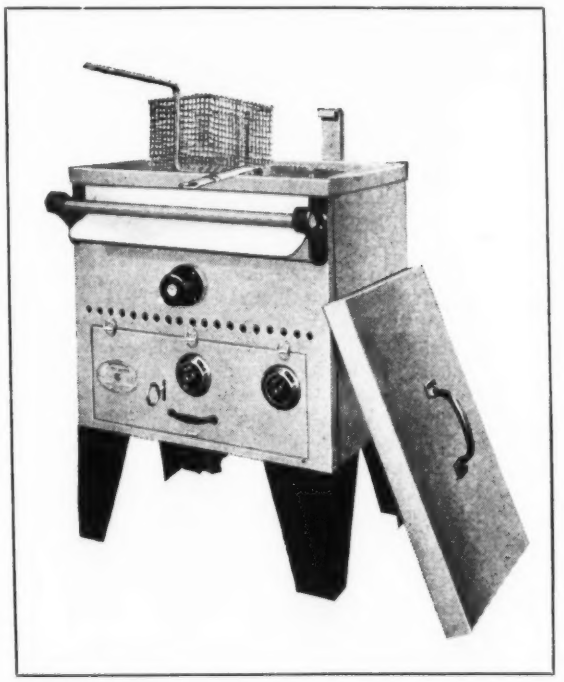
FRIES ALL FOODS IN THE SAME FAT



Positively no transfer of taste or odor . . . mail coupon now for details

Here's good news for chefs and restaurant operators everywhere who have been seeking better and more economical results from deep fat frying! Westinghouse announces an electrically operated fry kettle so efficient that it will actually pay for itself in a short time through savings in fat consumption! And not only that — this new kettle maintains such accurate temperature control (impossible with any fuel but electricity) that the fat cannot break down and absorb food particles. Consequently there can be no transfer of taste or odor, and the same fat can be used over and over again to fry doughnuts . . . onions . . . potatoes . . . or whatever the order calls for!

The Westinghouse Electric Fry Kettle is so compact that it requires less than five square feet of floor space even for the largest size . . . can be tucked into any convenient corner. Three models, 60 to 90-pound fat capacity, 4.5 to 11.25 KW electrical capacity. Comes to you complete and ready for action, furnished with wire mesh baskets, supporting screen, and kettle cover. Special screen for doughnut frying optional. Made of heavy cold rolled steel, thick insulation of mineral wool, handsomely finished in battleship gray with black japanned legs. Mail coupon for further information.



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COMMERCIAL COOKING

• EQUIPMENT •

WESTINGHOUSE ELECTRIC & MFG. CO.,
MERCHANDISING DEPARTMENT, DIV. 202
MANSFIELD, OHIO.

Send illustrated description of the new Westinghouse Electric Fry Kettle and other Westinghouse restaurant equipment.

Name.....

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Wilson

HYGIENIC SCHOOL WARDROBES

Showing installation in class room of Belmont, Mass. High School. Note how doors do not block aisle when wardrobe is open.

H. Thaxter Underwood, Architect.

These Wilson Disappearing Door Wardrobes were installed in College Hill Public School, Cincinnati. Elzner & Anderson, Architects.

What Good are Cloak Rooms, Anyway?

THE old-fashioned cloakroom has served its purpose, for the most part in demonstrating the useless construction expense attached to a separate walled-in enclosure, its unsanitary characteristics and as an obstacle in the path of educational efficiency.

School Boards all over the country specify Wilson Wardrobes. They do not encroach on valuable class room space. Disappearing doors project but 2½ inches into aisles. They conserve construction funds, saving, for example, $120 to $187 in a room 29′ x 22′ x 12′ ceiling.

Wilson Hygienic Wardrobes are constantly under the teacher's eye, promoting discipline. Ventilated, they are hygienic. Doors on certain types may be fitted with continuous or nearly continuous blackboards.

They are products of over 50 years of Wilson experience and development, installed under Wilson supervision and guaranteed for one year.

For full details as to advantages, descriptions, etc., including the Wilson Rolling Front type for small schools with limited construction appropriations, send for Catalog No. 14.

THE J. G. WILSON CORPORATION
11 East 38th Street New York City
Offices in all Principal Cities
Also Manufacturers of Sectionfold and Rolling Partitions

OVER FIFTY YEARS IN BUSINESS

(Concluded from Page 118)

a larger per cent of its total net indebtedness municipal, and a small per cent for schools other than the rural and urban districts. The median rural-school district had 83.2 per cent of its total indebtedness chargeable to schools, and only 16.8 per cent to municipal activities other than schools.

The cities had a larger median per cent ration of net indebtedness to assessed wealth than the other two types of school districts. The median city district had a total net indebtedness of 7.2 per cent of its assessed wealth. In the rural districts the median was 2.4 per cent.

The total school expenditures for the year ending June 30, 1929, was $117,359,042. Of the total of $237,026,911 for the year (school and municipal), 49.5 per cent was devoted to schools, and 50.5 per cent to municipal purposes other than schools.

The median district expended 60.7 per cent of its total expenditures for schools, and 39.3 per cent for municipal purposes. The median city district expended 47.1 per cent for schools, and 52.9 per cent for municipal purposes. The median rural district expended for schools and municipal purposes 66.4 per cent and 33.6 per cent respectively, while the median urban district expended 59.0 per cent and 41.0 per cent respectively.

SCHOOL ADMINISTRATION NOTES

♦ Chattanooga, Tenn. The local chapter of the American Institute of Architects has recently disapproved the proposed change in the administration system of the city schools. Under the proposed change, the existing commissioner form would give way to a new board of seven members, serving without pay. A committee has been appointed to prepare a statement, setting forth the reasons for the opposition to the bill.

♦ Columbus, Ohio. The board of education has been asked to approve an appropriation of $6,575,000 for the operation of the schools during the next year. The cost of instruction, amounting to $3,750,000, is the largest single item in the budget. Debt service which amounts to $1,400,000, is another item, while the remainder is given to administration, maintenance, operation, supplies, and miscellaneous items.

♦ The school board of Lawrence, Mass., is facing the problem of the married women teachers in the schools. At a meeting in September, the school board adopted a rule against women teachers continuing to work after marriage. One of the teachers continued to work after her marriage, whereupon the board discharged her. Suit was brought against the board, but a verdict in the teacher's favor became unnecessary when the board revoked its rule and reinstated her without loss of wages. Now the board has proposed a new rule, which provides that the marriage of a teacher during the life of her contract automatically cancels her contract.

♦ Indianapolis, Ind. Mr. Russell Willson, president of the school board, has recommended that the board either eliminate standing committees, or continue to leave committee work secondary and incidental. The suggestion was made in the interest of harmony in the open meetings of the school board.

CODE OF ETHICS

For Public-School Firemen and Janitors

Be punctual.

Strive to maintain a high moral standard in all you aim to do.

Assume with cheerfulness, and with a desire for cooperation, the duties and responsibilities, both expressed and implied, which constitute your work.

Be on the alert to promote to the greatest extent the physical welfare of those in your charge. This depends largely upon three things — sanitation, temperature, and ventilation.

Study and work to make yourself efficient and thereby promote your own welfare of those depending upon your service.

Apply the Golden Rule in your work and you shall find it will pay in every way from day to day.

— Homer E. Shufelo

♦ Freeport, Ohio. The school board has lost its suit against the village and must pay for water used in the schools. The suit arose after the board had refused to pay the full amount of the water last year.

♦ Cincinnati, Ohio. A new position, called the assistant commissioner of housing, has been created by the school board to relieve Commissioner C. W. Handman of some of his duties. The duties of the assistant commissioner will be to assist in the general supervision of the division of housing by relieving the commissioner of administrative details and to act in his absence; to assist in the adjustment of the division to the new accounting and record systems; to conduct and supervise research studies of school-building operation and maintenance; to devise and install complete records; to supervise studies of school-building plans and construction costs, equipment upkeep, and maintenance, and such other duties as may be delegated by the board or the superintendent of schools.

♦ Providence, R. I. The school department has undergone a radical change in personnel as a result of a rule terminating the services of all employees who have reached the age of 70. Practically all those affected by the rule are eligible for state or city pensions. The new order affects between 30 and 35 employees in school offices, teachers, principals, and janitors. The rule was adopted by the board at the suggestion of Supt. A. J. Stoddard.

♦ Cleveland, Ohio. Twenty-one employees of the business department of the board of education were dismissed on February 1, as a result of action taken by the board to reduce operating expenses. The housing division lost the greatest number of employees, with the dismissal of the assistant chief of the bureau of operation and six employees of the building safety division. Four employees were retained with reductions in salary. The total economy effected as a result of the lay-off amounted to $48,328.

♦ Detroit, Mich. The school board has cut 3 per cent, or $824,777 from the school-maintenance fund request.

Assures Maximum Usability

THE three sizes of this one desk will accommodate everyone from kindergarten pupils to full grown adults. It has an adjustment range (from 20 to 30 inches high) which assures the absolute maximum of usability. The adjustments are easy to make yet remain rigid and positive. Unlike other types which depend solely on the "binding" pressure of bolts and nuts, this desk adjusts on the time tested wedge principle. This H-W wedge type of adjustment holds like a vise and cannot work down. The posture type, swivel chair tops permit pupil to face side blackboards comfortably. The entire unit, being movable, permits flexible classroom arrangements and also simplifies sweeping and cleaning. Ask your nearest Heywood-Wakefield Sales Office for detailed information on the Unit Movable and other types of practical classroom seating.

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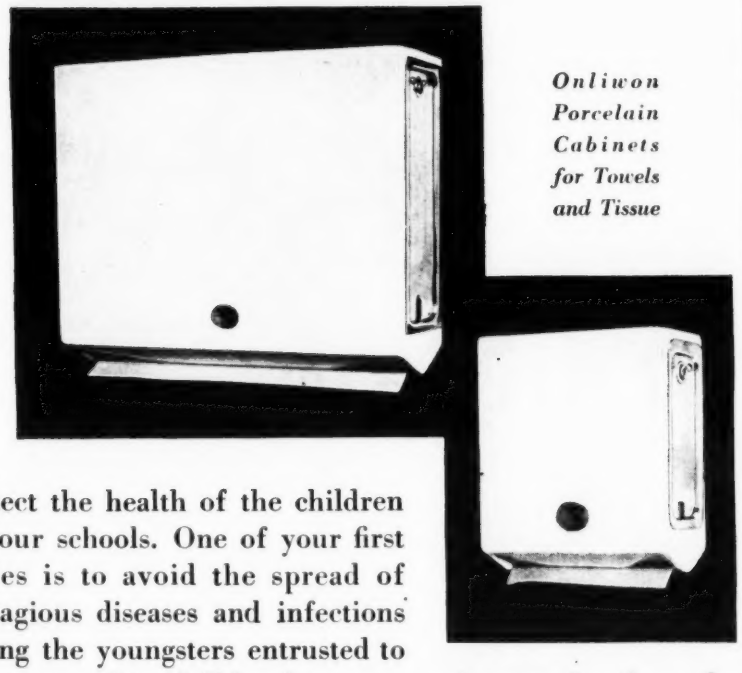
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Oregon
San Antonio, Texas
San Francisco, Calif.
Seattle, Wash.

Welcome N. E. A.

Heywood - Wakefield has prepared an interesting exhibit of school furniture for display at the Detroit Meeting of the Department of Superintendence, of the N.E.A. H-W booth numbers are 248, 249, 250, 254, 255, and 256 in the Fountain Ball Room of the Masonic Temple.

HEYWOOD WAKEFIELD

HOW SAFE ARE YOUR WASHROOMS?



Onliwon Porcelain Cabinets for Towels and Tissue

Protect the health of the children in your schools. One of your first duties is to avoid the spread of contagious diseases and infections among the youngsters entrusted to your care. Give full heed to your washrooms for there the dangers of contagion are rampant—through the use of the common, insanitary cloth towels and ordinary, harsh toilet paper.

Guard the children's health by supplying them with individual safe towels, and perfectly pure and sanitary toilet tissue. Equip your school washrooms with *Onliwon Paper Towels* and *Toilet Tissue.* Onliwon Toilet Tissue, interfolded, is pure, strong and non-irritating. It passes every hygienic test. Onliwon Cabinets protect both towels and tissue from dust, dirt and other contamination.

Onliwon Paper Towels are economical, as well as sanitary. They really save you money because they are double-folded, which gives them double strength and double absorbency. Onliwon Towels have from 10% to 58% more surface area than any other paper towels. It takes only one Onliwon Towel to completely dry the hands. Waste is reduced to a minimum.

● **Both towels and tissue are served from cabinets that are economical as well as sanitary. Onliwon Cabinets will not release more than one towel or two sheets of toilet tissue at a time. This avoids waste or theft. You will certainly find it worth while to have complete information on Onliwon Paper Towels and Toilet Tissue. Write today to the A. P. W. Paper Co., Albany, N. Y.**

A. P. W. is also the largest manufacturer of single fold towels as well as the oldest manufacturer of roll toilet tissues.

A.P.W.

TRADE MARK REGISTERED IN U.S. PATENT OFFICE

ONLIWON PAPER TOWELS AND TOILET TISSUE

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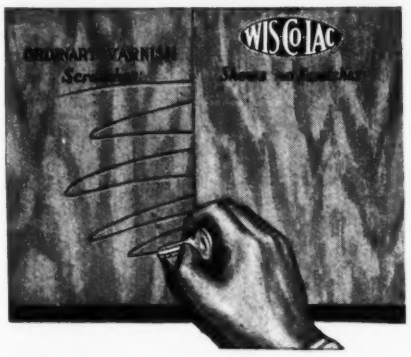
PIONEERS FOR CLEANLINESS SINCE 1877



Give This School Floor Varnish Every Proof-Test

Get a sample can of Wis-Co-Lac and try it on your schoolroom floors, under every condition—including severest foot wear. Test it now in preparation for your next floor refinishing. Find out why we say that Wis-Co-Lac, with all its advantages, is the final solution of your school floor problem. Send for a sample can of Wis-Co-Lac now. Address Wis-Co-Lac Company, 126 Piere St., Port Washington, Wisconsin. (Division of National School Equipment Co.)

NO WAX

NO OIL

NO WEAR

STAYS ON

Gets all the dirt at every cleaning

FIVE days a week from 9 to 3 o'clock your floors are collecting dirt. Worse than that, hundreds of feet are continualiy tramping it down and grinding it into the surface. Unless you remove every trace of this dirt with each cleaning, using a non-grease-forming, free-rinsing cleaning material, then discoloring deposits, greasy films, are certain to accumulate, and detract from the appearance of your floors, making them slippery and unsafe.

Cleaning marble, tile, concrete, or terrazzo floors with Trazite will prevent this. A small amount of this quick-acting, sudsless material in a pail of warm water loosens grease, oil, and grime in a jiffy. It rinses freely and does not leave a film, because it contains no soap or soap powder.

Floor cleaning is but one of the many jobs on which Oakite materials give you highly satisfactory results and effect substantial savings in time and effort. Others are outlined in an interesting booklet. Write for a copy. No obligation.

Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.

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For Your Maintenance Budget!

SONNEBORN

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A WALL, a floor, a ceiling—something is always requiring labor, materials, expense. How can you do what is needed and still hold down disbursements?

Let Sonneborn work with you just as if we stood in your place. In hundreds of schools and colleges we have learned what to do and how to do it, at the lowest cost consistent with sound, lasting results.

Whatever your upkeep requirements may be, consult us. Let our experts act as physicians to your building. We have the right materials. We counsel the right procedure to combine good work with economy. We place behind every Sonneborn product the absolute guarantee of a strong, reliable house.

Note these famous Sonneborn savers of school buildings and upkeep expense. The coupon below will bring you detailed information.

LAPIDOLITH
—A chemical liquid-hardener for preserving and dustproofing concrete floors.

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—For finishing, preserving and wearproofing wood floors.

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—For waterproofing exterior of exposed walls.

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Exterior and Interior Paints—Tough, durable floor paint that produces an attractive high-gloss finish. Various colors.

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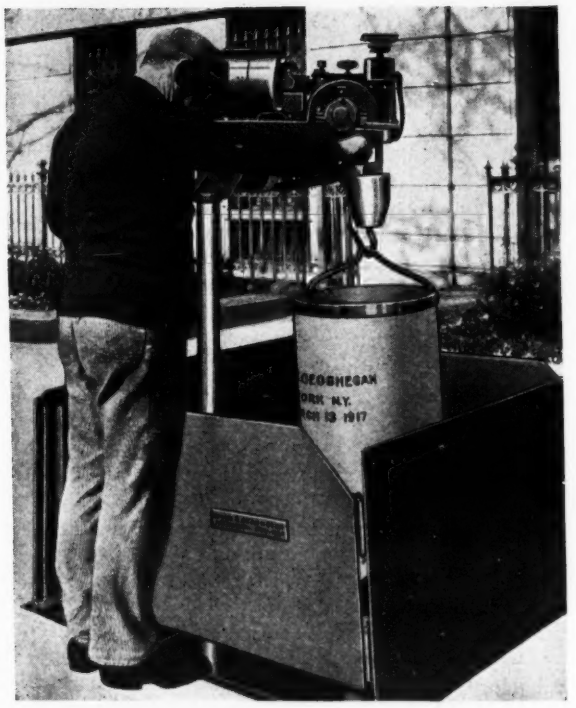


G&G Model E Electric Hoist in use. Note how sidewalk opening is fully protected by G&G Sidewalk Doors with Swing Guard Gate.

TELESCOPIC HOISTS SPEED THE REMOVAL OF ASHES, RUBBISH, ETC.

THE removal of ashes, rubbish and garbage from school buildings is no longer a haphazard operation. It is planned by the architect in consultation with school officials. G&G Telescopic Hoist equipment has already been selected for more than 2,050 schools in 44 states. The use of G&G Hoists is constantly increasing, and they are now standard equipment with the Boards of Education in ten of the larger cities.

There are Electric and Hand Power models to meet every condition. The installation cost is moderate and there is a great saving in labor. But of outstanding importance to the school official is the fact that with G&G Telescopic Hoist equipment, the sidewalk opening is fully protected at all times, a safety feature that has added much to the popularity of this equipment in the school field.

Get all the details. Write for complete catalog.

the G&G ELECTRIC REG. U.S. PAT. OFF. **Telescopic Hoist**
With Automatic Stop and Gravity Lowering Device

GILLIS & GEOGHEGAN

551 West Broadway, New York, N. Y.

Planning Science Laboratories for High Schools

A. C. Monahan, Formerly U. S. Bureau of Education

(Concluded from January)

Other Rooms for Science Classes

Science courses include, of course, both laboratory exercises performed by the pupils themselves, and classroom demonstrations by the instructor; also recitations. Provision must be made, therefore, for a place for recitations which may also be used for demonstrations by the instructor. In general science and biology the laboratories themselves are usually used, pupils remaining seated at their work tables. This is possible because work tables for these subjects are usually of the same height as ordinary laboratory tables.

In physics and chemistry laboratories, with the ordinary type of desks used, this plan cannot be followed, as the tables are not suited for pupils to sit at in comfort. Three plans are followed: (1) A separate demonstration and recitation room is provided especially equipped for demonstration work, one for physics and one for chemistry in the very large schools, but in others a single lecture room usually placed between the chemistry and physics laboratories and used for both classes. (2) Laboratories are made large enough so that space at one end may be fitted with a lecture table and students' tablet-arm chairs. (3) Special furniture is used, of a newer type than the customary chemistry desks and physics tables, which permits work both standing and sitting and which may be used comfortably by pupils when watching a demonstration or engaged in a recitation.

The separate demonstration and recitation room has much to commend it, and certain points which are not educationally an advantage. When placed as stated above, with the supply rooms of the two laboratories adjacent to it, one on either side, equipment and apparatus are convenient to the instructor. The lecture room itself may be equipped with certain permanent apparatus, such as a stereopticon lantern, shades to cover the windows and darken the room for experiments in light, etc. The seating capacity should be double or triple that of any laboratory at any one time, so that two or three laboratory divisions may be combined for special demonstrations.

Such a lecture room is convenient but is an expensive room, not only because of the space occupied, but because used relatively little of the time. Studies show that with this arrangement the lecture room is usually vacant from 50 to 75 per cent of the hours schools are in session.

Classroom space in each laboratory is a decided educational advantage because of the convenience. The instructor may stop individual work at any time and assemble his class for instruction or demonstration. He also has a place available where the more rapid students, when they have completed their experiments, may sit and write up their notes or study, out of the way of others who are working and still under his observation. Its principal disadvantage is again the waste of space and also the necessity of duplicating certain pieces of apparatus used in both chemistry and physics. With this arrangement each laboratory requires from 25 to 35 per cent more floor space than under the third arrangement mentioned below.

By the use of especially designed furniture for physics and chemistry found satisfactory during the past half-dozen years, the students' work desks may be used for seated work, and the separate lecture room or classroom space at the end of the laboratory omitted. The only additional space required over that necessary in the ordinary laboratory is enough for an instructor's demonstration table. This means usually a room from 6 to 8 feet longer than would be required otherwise.

Size of Laboratories

The size of the laboratory, of course, depends upon the number of pupils to be included in the single section. The consensus of opinion seems to be that a single instructor cannot supervise sufficiently more than 24 pupils at one time. Of course, in the small high school there will seldom be more than 24 in any one class in any science work. In larger schools 32 pupils to the class is not an uncommon practice. In certain large city schools, where an assistant instructor is available, laboratories for 40 to 60 pupils are satisfactory.

For a class of 24 pupils, the room to be used for laboratory pupils only, the standard classroom, 22 or 24 feet in width and 30 or 32 feet in length, is satisfactory. In chemistry this permits the use of 3 double-student tables, each 3 feet high, 12 feet in length, and 4 feet wide, placed crosswise with the room. There is still room for a balance or window shelf running the entire length of the room on the window side, and for three fume hoods, a sink, and an apparatus cabinet on one end. The window shelf is approximately 18 inches wide. Between it and the end sinks on the chemistry tables a 3½-foot space is left. The space between the student tables is 4½ to 5 feet. Approximately 4 feet remains between the interwall and the sinks on the inside end of the chemistry tables.

The same size room for physics may be fitted with three 12-foot tables, 4 feet in width. Most instructors, however, prefer tables 6 feet in length and 3½ feet wide, each for 4 students. With such tables, each student has a corner to work about, which is considerable advantage. With these tables a space of 3 feet is left between each 2 in the same row. This takes up practically the same space as is required on the chemistry tables with their end sinks.

In general science and biology three 12-foot tables may be used, each 3½ or 4 feet wide with students working on both sides. This, however, is not so satisfactory as the narrower tables with students facing one direction. This is real economy as the room may then be used for demonstrations and recitations. Six 12-foot tables, each 22 inches wide, placed 30 inches apart, leave room at the front end for an instructor's desk and space for the instructor. Five 15-foot tables give an opportunity of spreading out so that the instructor may circulate among the class to better advantage. They would accommodate 25 pupils and leave plenty of room for window shelves, germinating beds, sinks, a storage cabinet, and so forth.

If the plan is followed of providing the demonstration-recitation space at one end of the physics and chemistry laboratories and in the laboratories themselves as suggested, the room should be 42 to 44 feet in length. This gives space at one end for a lecture table and 24 tablet-arm chairs for pupils. If the Lincoln School type of table is used, the room need not be over 36 feet in length although 38 feet is to be preferred. The standard width of 22 or 24 feet is sufficient.

EQUAL PAY FOR EQUAL WORK?

(Continued from Page 60)

doubtedly true that equal-pay legislation is costing the City of New York at least three millions of dollars a year more than would be expended under the natural workings of economic law.

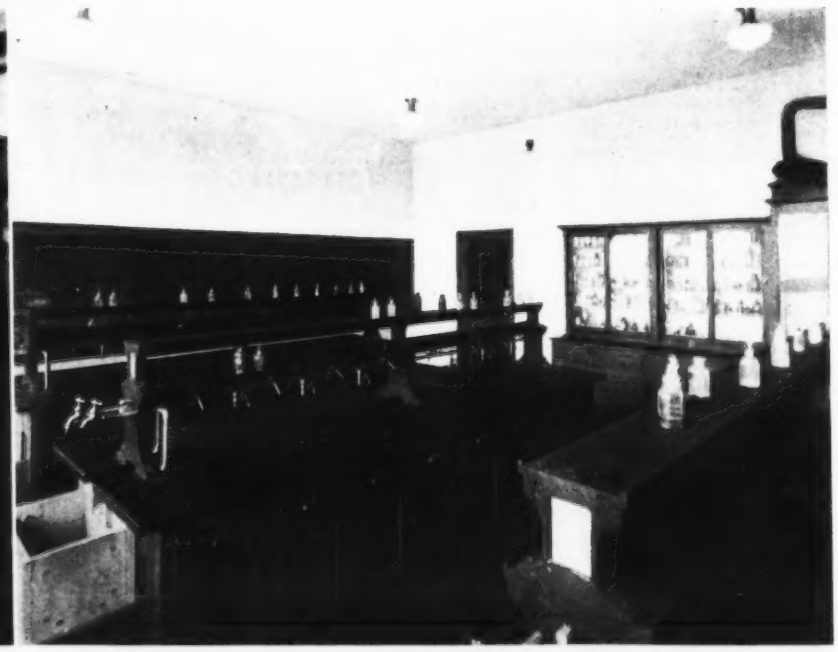
There is only one solution to the problem. We must admit frankly that the tentative solution which has resulted in equal-pay legislation is not the final one. The whole problem must be reopened for discussion and a new solution reached in the light of the unyielding workings of economic law.

How Problem Must Be Solved

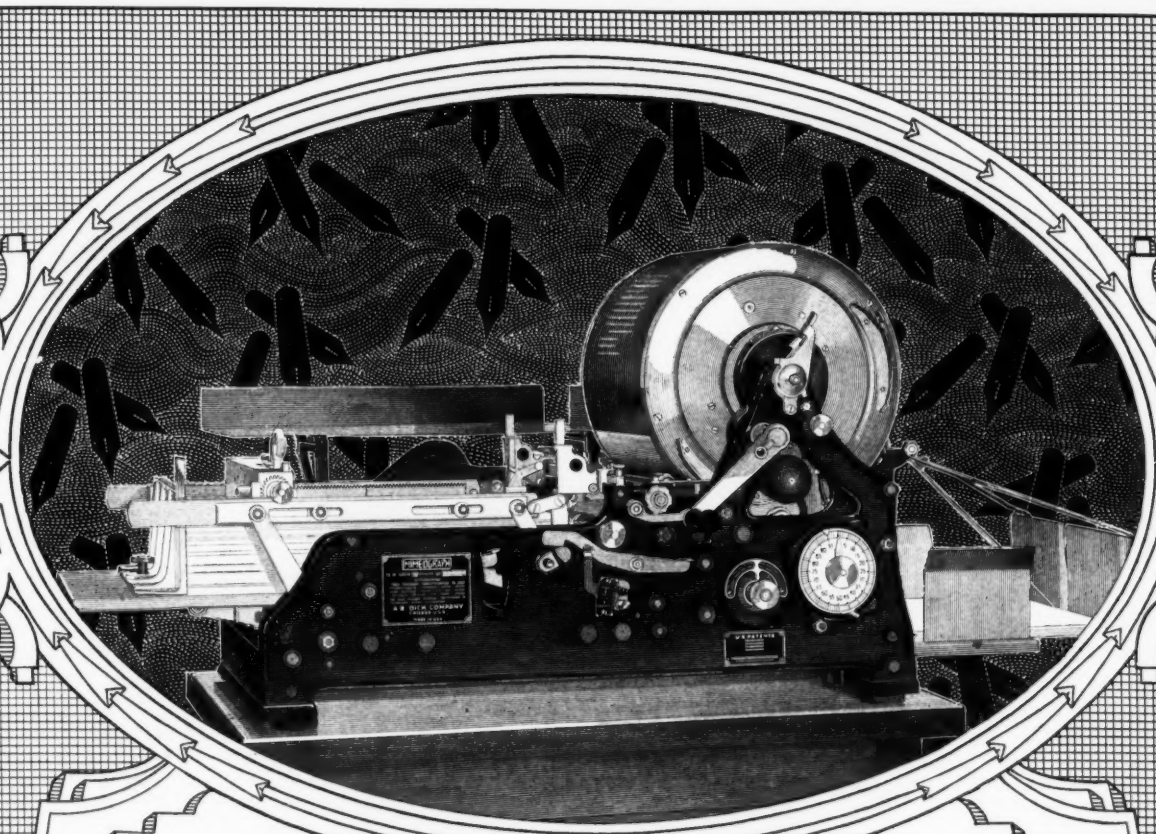
Until this is done, a single board of education can make no move toward solving its problem

(Concluded on Page 126)

PHYSICS AND CHEMISTRY LABORATORY, SWEDESBORO, NEW JERSEY



CHEMISTRY LABORATORY, JENKINGTON, PENNSYLVANIA



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From February 21st forth, at the N. E. A. Convention, Masonic Temple, Detroit, in Booths 128-129, the greatest of all Mimeographs will be on display. You are cordially invited to inspect it and the other standard models shown. The Mimeograph is not merely a convenience to school administrators, it is also a real money-saver and a money-maker. Let us demonstrate.

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that your programs, bulletins, examinations, office record sheets and cards, course schedules, posters, questionnaires, grade sheets, etc., may all be most easily, speedily and economically produced by the Mimeograph Process? Whatever is written, typewritten or drawn in line, can be duplicated by the thousands within the hour. For details and specimen sheets inquire at the Convention, write A. B. Dick Company, Chicago, or communicate with branch office in any principal city. See Mimeograph trademark heading in classified telephone directory.

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When persistence is backed by a policy to excel, popularity is steady and certain.

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(Concluded from Page 124)

if all of the neighboring cities continue to pay men and women equally. No single city can afford to pay men teachers higher salaries than women if this policy is contrary to the current practice in that section of the country. Its women teachers will feel, with justice, that they are legislated against and that gross partiality is shown to their men colleagues. The resulting loss of morale in the instructional staff of the school system will be a greater economic loss than the overpayment of women teachers or the employment of men teachers with inferior qualifications. The problem must be attached in the large and in the light of sound reasoning, professionally and economically.

Furthermore, we would say in closing that teachers will not secure salary schedules which are economically and scientifically sound until they conduct salary campaigns on some basis other than than of demanding special privileges for their profession. Sentimental hysteria about the noble, self-sacrificing service which they render and the supposed fact that those in their profession are chosen of God, somewhat as ministers are, should have no place in an earnest consideration of the salaries which should be paid to the members of a respectable and self-respecting profession.

HOW DETROIT MANAGES THE BUSINESS PROBLEM OF THE PUBLIC SCHOOLS

(Concluded from Page 58)

3. Keeping a record of the proceedings of the board.

4. Conducting the business correspondence of the board.

5. Filing and opening bids and making contracts.

6. Operation and maintenance of motor vehicles and garage.

Records and Accounts

1. Maintaining the necessary financial records.

2. Drawing and signing all vouchers ordered by the board.

3. Maintaining inventories of all property.

4. Maintaining a cost-accounting system by activities showing student hour and per-capita costs.

Purchase, Storage, and Distribution of Supplies

1. Purchasing and directing the storage and care of materials, supplies, and equipment.

2. Delivering all materials, supplies, and equipment carried in supply warehouse to schools.

Operation and Maintenance of Building and Grounds

1. Maintaining all grounds and buildings in proper condition for operating schools.

2. Checking mechanical specifications for new buildings and additions.

EQUIPPING THE SCHOOL FOR RADIO RECEPTION

(Concluded from Page 62)

about this for the lower grades, however. Some maintain that for younger children, more satisfactory reception results when the speaker may be brought to the pupils. Many speakers already installed are as high as two feet or even more above the top of the blackboard. It would seem desirable to have them lower, even somewhat lower than the top of the blackboard. Children will naturally try to look at the source of the sound, if they are concentrating, and oftentimes a group may be seen with their necks bent and heads thrown back in a very uncomfortable position, in order to fix their attention upon the loud-speaker. The loud-speaker may be equipped with selector and volume control, either on the speaker itself, or, if it is too high, then located lower for the convenient adjustment of the teacher. Lead-covered, shielded cables of the proper-sized wire should be led in pairs through conduits to each loud-speaker, from the master set. This is much easier installed when the wiring for the program clock, interroom telephones, etc., are installed than later. Much help may be had and the problem greatly simplified by proper construction.

The installation of the master set and proper insulated wiring of the type mentioned will care for any future use of television which may become practical.

Editor's Note. **This is the third paper in the series on Radio Education by Mr. Jarvis. The fourth will appear in April.**

♦ MR. J. J. STOUT has been reëlected vice-president, and MR. L. F. CLARK as secretary-treasurer, of the school board at Xenia, Ohio.

♦ MR. R. J. MIARS has been reëlected president of the school board of Wilmington, Ohio. MR. F. W. HAWORTH was reëlected as vice-president.

♦ The school board of East Cleveland, Ohio, has reorganized, with the reëlection of MR. G. J. PROVO as president, MR. R. E. NIXON as vice-president, and MR. D. C. VAN BUREN as clerk-treasurer.

♦ DR. B. O. KRELICK has been reëlected president of the school board of Fremont, Ohio. MR. NORMAN FULTON was reëlected vice-president, and MR. C. F. WALTON as clerk of the board.

♦ MR. C. E. BUSSERT, superintendent of schools at Blanchester, Ohio, died at his home on January 9, after a brief illness.

♦ The school board of Delphos, Ohio, has reorganized, with the reëlection of MR. C. J. LEILICH as president, MR. F. S. SCHERGER as vice-president, and MR. L. C. ALLINGER as clerk.

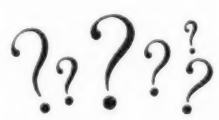
♦ The school board of Conneaut, Ohio, has reorganized, with the reëlection of MISS LOUISE KAHLER as president, MR. CHARLES OTT as vice-president, and MR. CARL MILLARD as clerk.

♦ The school board of Urbana, Ohio, has reorganized, with the reëlection of MR. W. R. WILSON as president, MR. J. C. NEER as vice-president, and MR. F. F. PAULIG as clerk.

5000 educators showed us what talking pictures to make

"Powerful force"—new teaching medium is called

Power and vividness make this medium a new vitalizing force to aid teachers in their work. Its great possibilities are fast becoming realities in the hands of Electrical Research Products Inc., a subsidiary of Western Electric, the organization that made talking pictures possible.



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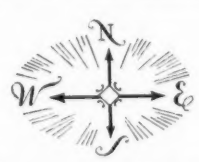
From the very start of educational talking pictures, group judgment has guided our decisions.

First of all, a questionnaire was sent to 5000 educators in every part of the country. "What subjects do you consider best adapted to talking picture presentation?" The results of this investigation were weighed by a staff of experienced educators permanently maintained by Electrical Research Products, and subjects for talking films chosen in the fields where the need seemed greatest.



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To assist in the production of each talking film a recognized educational leader is selected who prepares the subject matter and usually appears in the picture. Authorities from every part of the country give a breadth of view as well as a depth of specialized knowledge.

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The educators chosen have worked hand in hand with our talking picture directors and scenarists — long experienced in talking picture production. At their disposal are all the knowledge, equipment and facilities of Western Electric, The Bell Telephone Laboratories and Electrical Research Products. The recording is done by the standard Western Electric Process which is in use by the leading producers of theatrical sound films.

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WHAT'S HIS WIFE LIKE?

(Concluded from Page 36)

up for each other outside beats the world!"

"Well, think it over," continued Mr. White, as his caller arose and reached for his coat and hat. "Wilson is a good man and a comer. He's loyal; he's tactful; teen-age boys trail after him like the tail to a kite. He's progressive without being faddish; he backs up his teachers yet makes them work. I hate like all get-out to see him go, Brown. But we can't let this school turn into a meal ticket for any sorority."

"I'm glad we had this talk," answered Mr. Brown. "I knew there was more to it than your letter told. My son's wife knows the young set; she went to college three years, and if I can't get this information out of her I don't belong on the board. Better not send Wilson over till I phone you. Come in when you're in town. Good-by."

SAFEGUARDING SCHOOL DEPOSITS

(Concluded from Page 39)

a secondary reserve and may be liquidated into cash in a short time if necessary.

9. *Fixed Assets.* As a rule, banking house, furniture, and fixtures should not exceed 50 per cent of the capital funds. Since these items are paid for out of the capital funds, they deplete the liquid working capital to that extent. However, a large bank building may be drawing a good income from rentals, which should be taken into consideration. If a bank statement includes a large amount of "other real estate," it may include property obtained through foreclosure, which is frequently an unfavorable sign.

10. *Reserves.* A bank must have sufficient reserve so that it can meet the ordinary demands of its customers and still allow some margin for unforeseen withdrawals. Cash reserves are required by law, and a bank that does not conform with the legal requirements is not considered a good risk. The available cash should be not less than approximately 15 per cent of the total deposits for a commercial bank. Some elasticity must be allowed for time and demand deposits.

The reader is warned that he is not expected to take the ten items just listed as criteria for judging the relative safety of a bank and use them in arriving at a definite opinion regarding the safety of his local bank. These items have not been weighted. A bank may give out a statement showing that one or two of these items are unfavorable, yet the bank may be sound. Other items of information are also helpful in judging the condition of the bank. The surety-company officials who have used the preceding ten items in determining whether or not they should bond a particular bank, have often arrived at the wrong conclusion, resulting in a loss to their company. If these surety officials with their wide experience make mistakes, the average individual can hardly be expected to analyze a bank statement and come to the proper conclusion with infallible accuracy. It is hoped, however, that this discussion will lead the school authorities to pay more attention to the relative safety of the banks they select as public depositories.

MALADJUSTMENTS IN SCHOOL ADMINISTRATION

(Continued from Page 46)

After all, a superintendent is elected to carry out the wishes of the school board, and although the methods which he employs in doing this can usually be left to his discretion, in cases where the human equation enters into his problem, he had better proceed with caution and proceed only when he has the full confidence and coöperation of the board of education.

Another case which illustrates the danger inherent in a lack of full understanding between the superintendent and the school board in which pseudo-generosity on the part of the school board leads to misunderstanding is here presented.

A "Supplies" Situation

Case V. "A newly elected superintendent of schools asked his board how much leeway he would be permitted in the purchase of supplies for the school. He was told to go ahead and get what was needed, that he was to do the ordering. On this basis, he went ahead, placing orders and securing supplies which he thought the school should have. Suddenly, the board began to question the advisability of some of the purchases he had made. As a consequence, the superintendent felt that he was not being treated fairly; his confidence in the judgment of his school board was undermined. The board, in turn, felt that the superintendent had exercised poor judgment in his purchasing. Mutual confidence was thus destroyed."

Students of school administration have a ready solution for a difficulty such as this case presents. If the superintendent had prepared a carefully constructed budget with detailed supporting schedules to substantiate his estimates, the problem he and his board had to face would not have arisen. Only by a careful estimate of the needs of a school system which the school board studies carefully, revises to satisfy its own views, and then adopts as its plan for the fiscal year can a misunderstanding such as this relative to purchase be eliminated for a certainty. After once adopting a detailed budget, the board would no longer have any occasion to pass on the purchase of each article except to authorize the payment of such bills as are presented by those from whom purchases may be made.

A Committee Problem

Case VI. "Upon assuming his duties in a central Minnesota school system a superintend-

(Continued on Page 130)

COMRADES in Visual Experience

. . . . the ideal relationship between teacher and pupil

ONE VIRTUE of a field trip is that it makes the pupils and teacher partners in discovery. Incidents of the trip arouse the children's interest. They come eagerly to the teacher for explanations. They form their own ideas and are anxious to express them.

Every teacher realizes the value of this partnership attitude in instruction. Field trips, however, require a vast amount of time and effort, and the exploring attitude is difficult to create under ordinary classroom conditions.

Eastman Classroom Films serve the same purpose as field trips, for they bring the world's knowledge to the classroom as *visual experience*. They stir the interest of pupils . . . inspire them with original ideas . . . create a desire for self expression . . . foster the growth of a significant vocabulary.

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Eastman Classroom Films are not a substitute, either for the teacher or for long established classroom methods and devices. School authorities are beginning to realize more and more the significant value of these films in *supplementing* other teaching devices in the modern classroom. They are now used in more than 200 cities and towns of the United States, and in thirty foreign countries.

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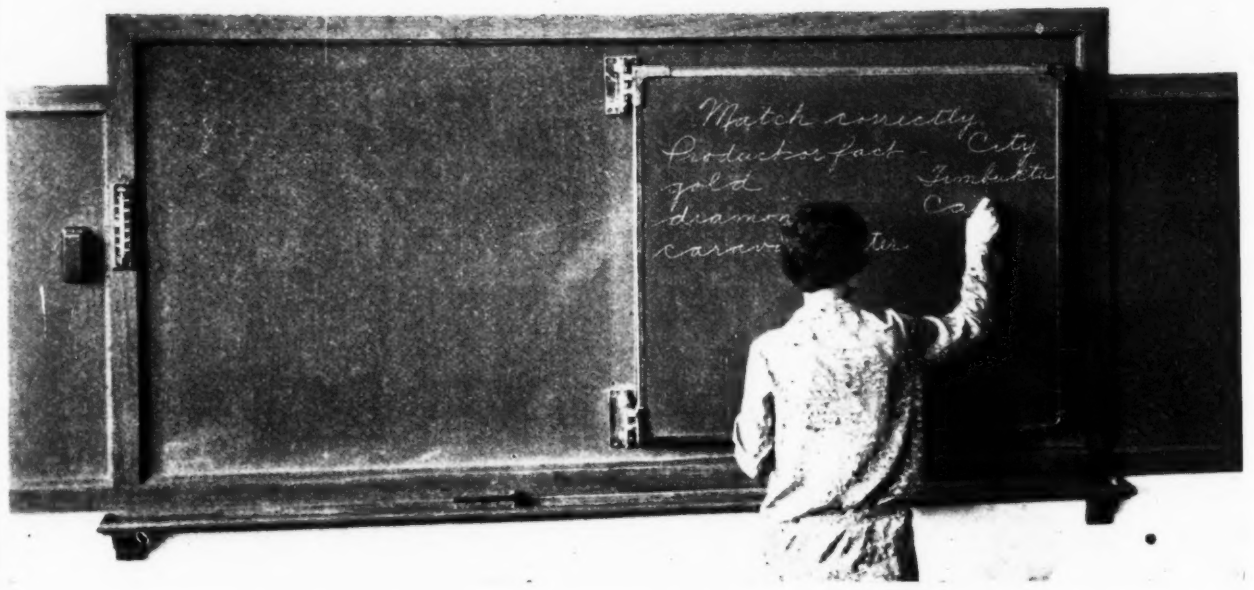

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(Continued from Page 128)

ent was informed that the school board had a purchasing committee consisting of three members of the board. At the same time, the superintendent was assured that he was to have a hand in making needed purchases for the school. Upon inquiry, the superintendent discovered that the school board had not thought through the problem arising from these conflicting policies sufficiently to be able to answer definitely these three questions which the superintendent asked: (1) Is the committee to make the actual purchases, or is it simply to approve purchases which I am to make? (2) Must I secure the approval of the committee for every purchase made, or will the committee consult with me each time before making a purchase for the school? (3) Does the board wish to have it understood that certain things are to be purchased by the superintendent whereas others, in turn, are to be purchased only by the purchasing committee? Desiring to please the new superintendent and yet retain its purchasing committee, the board finally decided that the superintendent was to be permitted to purchase up to $25 of supplies each month without first securing the approval of the purchasing committee."

This school system, also was operating without a careful educational and financial plan which would be reflected in the adoption of a good school budget. By its action, the board from the start of its relationship with the superintendent withheld its full confidence in him. In addition to creating an embarrassing situation, the board, by establishing an unnecessary purchasing committee and restricting the acts of the superintendent without any demonstrable justification, created a condition which had no chance to prove satisfactory. The adoption of a sound budget would have made the committee and the restriction unnecessary, and would have paved the way for establishing a feeling of mutual good will and confidence between the superintendent of schools and the members of the school board.

A second case touching on this problem of school board and superintendent relationships in the purchase of supplies, which we here present, illustrates another type of maladjustment which is not so rare as we might wish it to be.

Serving the President, not the Board

Case VII. "In city 'Z' the president of the school board, by reason of his long period of service and personal characteristics, had become the dominating member of the board. He had gradually assumed control to such an extent that he was virtually the school board. One year he decided that the superintendent should consult him regarding all purchases which the superintendent wished to make. The superintendent, knowing that he was confronted with a one-man board, did as he was asked to do by the president. After a time, the other board members discovered what was going on, felt neglected, and started out to remedy matters. Once aroused, they combined to deprive the president of his domination by their open opposition to his leadership. At the end of the year the superintendent who was 'forced to run to the president for O.K's' lost his position as a result of the dissension which had arisen within the board."

Perhaps the superintendent's tenure would not have been as long as it was had he objected in the first place to going to the president for the latter's approval of his acts. However, it is doubtful that this case could have been presented here had the superintendent appreciated the correct relation which should have existed between himself and the school board, discerned the consequences of the inherently unsound organization of the board, and then taken steps to educate the whole board to his view. Here, too, we can point out that a good budget, formally adopted by the board, may have prevented the disaster which overtook the superintendent because of his willingness to resign himself to a condition which he must have known to be fundamentally unsound and thoroughly undesirable.

Doubtless the reader can cite other illustrations of maladjusted school systems in which the relationships of the superintendent and the board of education to each other, and to the work to be done in performing the executive and legislative functions involved in the administration of a school system, are clearly unsound. From a constructive point of view, we must consider the question of what we are going to do about these maladjusted conditions which we know exist and which we can, in many instances, clearly demonstrate give rise to friction, inefficiency, and waste, jeopardize the quality of the educational program, and subvert the best interests of the communities in which they are found.

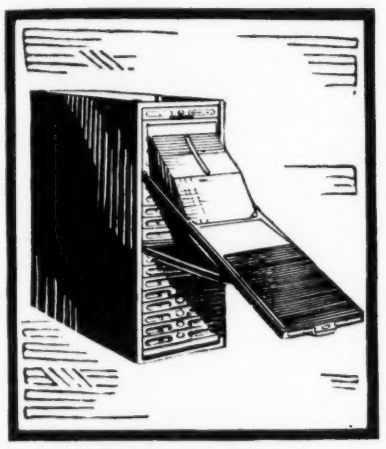
Better Professional Service Needed

The solution, in the opinion of this writer, rests largely with the professional schoolman and more particularly with the superintendent of schools. More so than ever before, we now have in the field a group of professionally trained school administrators. In the near future we shall have adequately trained and relatively capable men and women in charge of even the smaller school systems which have, heretofore, in a large number of instances, been denied the quality of educational leadership found in city school systems. With the increase in trained and professionally-minded school administrators we can look forward with confidence to improved conditions in the field.

School-board members are themselves making commendable progress in learning what work should properly be performed by school boards.

(Concluded on Page 133)

THIS BUSINESS *of buying* ADMINISTRATIVE EQUIPMENT



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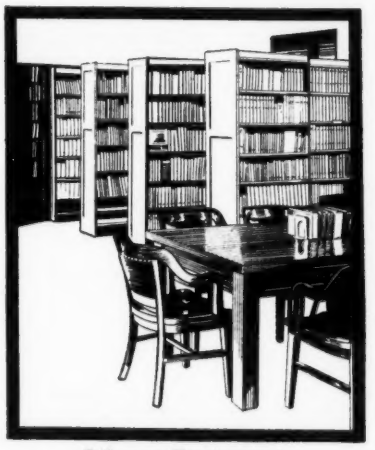

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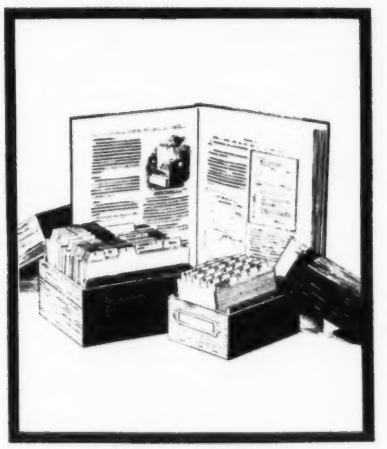

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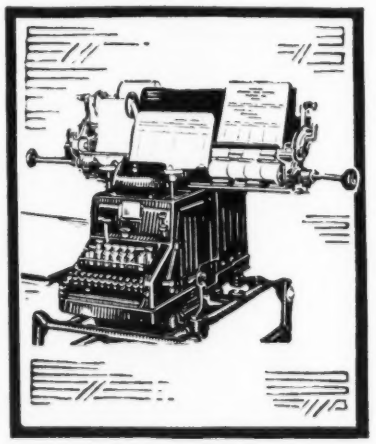

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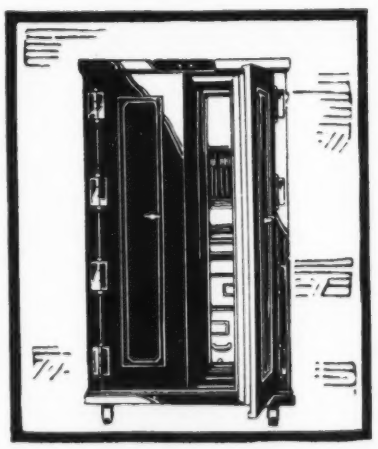
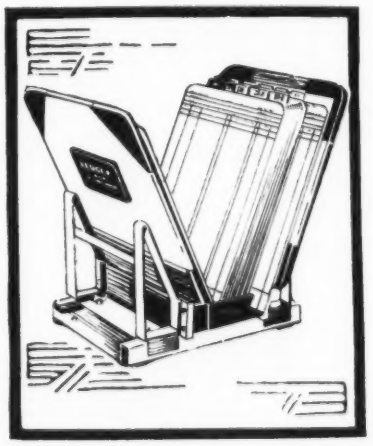
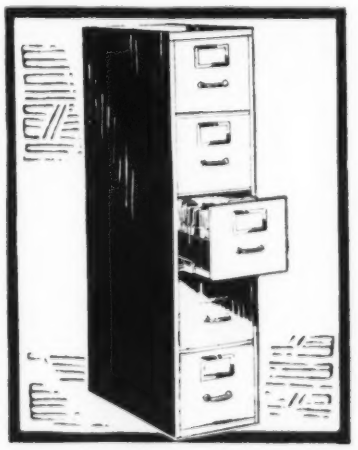


Safe Cabinet



Binder



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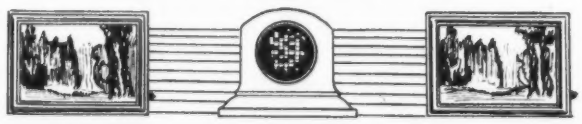

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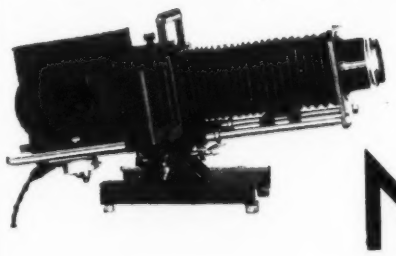

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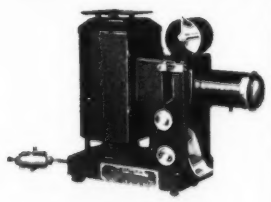
OF EVERY TYPE



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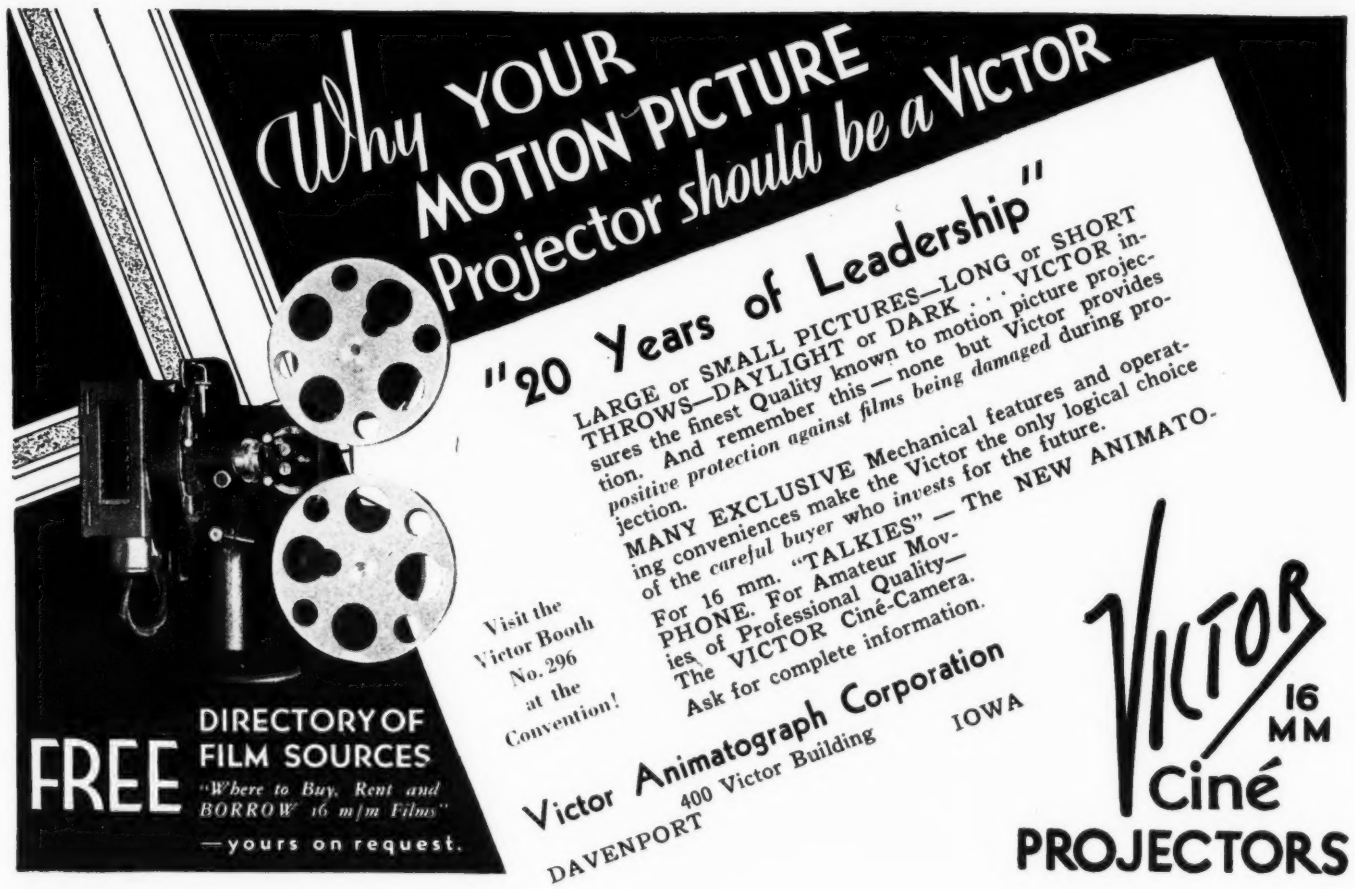
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(Concluded from Page 130)

There can be no doubt that the concept of a professionally trained school executive is developing in the minds of school-board officials as well as in the minds of school executives. Not only the educational program, but, in many school systems, the financial and business aspects of school administration, as well, are now under the direction of the superintendent of schools. School boards are learning that it is impossible to separate the financial program of a school from the educational program, and that the assistance of the superintendent is essential in planning the financial program and conducting the business affairs of the public schools.

In connection with the promotion of progress in school administration by developing a better understanding between school superintendents and boards of education, the superintendent of schools has an important obligation to meet. It is his duty to assist his school board to ascertain its proper functions and to otherwise pave the way for a proper differentiation between executive and legislative functions and their allocation, respectively, to the superintendent of schools and to the board of education. As an agency for educating a school board in the ways and means of effective school organization and administration, no one should be better qualified nor does any other agency possess greater opportunities to perform this function than does the professionally trained school executive.

AN INTERESTING DEPARTURE IN SCHOOL-BUILDING CONSTRUCTION

(Concluded from Page 52)

its specific purpose. The sewing room, which has over 800 square feet of floor space, is illuminated unusually well and contains generous closet space of the built-in type. The social room for parents and adults where community programs are given, where social parties and afternoon teas are held, is large enough to seat comfortably more than 100 persons. The domestic-science room contains 4 unit kitchens and has modern equipment down to the last detail. This room is located so as to serve conveniently both the social and the teachers' dining rooms.

The entire building, exclusive of furniture and equipment, cost less than $85,000, the use of mill construction making it possible to keep construction costs low. The architects employed were Holmes and Von Schmid, of Montclair.

The Baldwin Street Community House, located on an attractive site, is an interesting and significant addition to the Montclair public-school system. The Montclair board of education in erecting this building has effectively and economically combined utilitarian values with architectural beauty and authenticity.

A NOTABLE COMBINATION SCHOOL

(Concluded from Page 53)

poses, a domestic-science suite, and an auditorium-gymnasium. The auditorium has a main floor measuring 41 by 70 ft., with an ample stage equipped with a large dressing room. The stage is on the long side of the room so that it will seat a considerable audience when games and other physical activities are going on in

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the room. The balcony of the auditorium, which is equipped with a motion-picture booth, is entered from two stairways, one of which leads to the classroom section of the building on the second floor. This balcony is immediately over the domestic-science suite and is so pitched that the audience when seated can view the entire playing floor.

The second floor contains a large study room, arranged to adjoin the library, a combination laboratory-and-science recitation room, an additional recitation room, toilets, and an administrative office for the principal.

In the basement there are locker rooms for boys and girls and space for the heating plant.

The grade-school building which is attached to the high school has a separate entrance to the auditorium-gymnasium. The building is heated by means of a vacuum vapor system, with unit ventilators in each of the classrooms.

The cost of the complete building was $93,322.26.

DETROIT LOWERS ITS SCHOOL COSTS

(Concluded from Page 56)

two corner spaces in the front. The library is opposite the entrance, with special and science rooms extending down either side of the court. Special rooms are on this floor.

In one corner is the open-window room, one of a group scattered among the Detroit schools, which care for over a thousand children who are substandard physically. These rooms are for the convalescent, malnourished, a few cardiacs, and some others.

On the second floor of the school are 12 homerooms and 3 special rooms. The lunch-play room is located on this floor.

The continued use of the slab ceiling, cinder-block walls and brick facing in several schools, and the consistently lower costs, makes this type of building of particular interest to educators in the public-school field.

SCHOOL-BOARD MEMBER ORDERED TO PAY JUDGMENT

With the filing of a judgment in the amount of $16,150 against Jalmer Johnson, defendant, by the district court at Virginia, Minn., there appears to be an end to the long-pending restitution suit of the Virginia schools which had been in the courts for more than three years.

The original action was begun in June, 1927, by William Trichler, a taxpayer, against members of the 1926–27 school board, to force restitution to the school districts of monies alleged to have been illegally expended in the construction of a school athletic plant, and for other purposes.

MR. O. J. LAYLANDER
Retiring Manager of Ginn and Company, Chicago, Illinois

Of the $16,150 involved, $10,500 was expended for three lots purchased by the school board, which were sold to the city, and are now being used for a municipal power plant.

The court ordered that the defendant be given title to the lots, alleged to have been illegally purchased, upon the payment to the district of the sum of $10,500. The balance of the judgment represents sums expended by the board on accomplishments in the athletic plant, together with interest and costs of the action. Originally, six members of the board, with their bonding companies, were made defendants in the suit, but action was dismissed against all but Mr. Johnson, who was brought to trial. The defendant now is serving his second term as a school director, having been reëlected to office since the beginning of the suit.

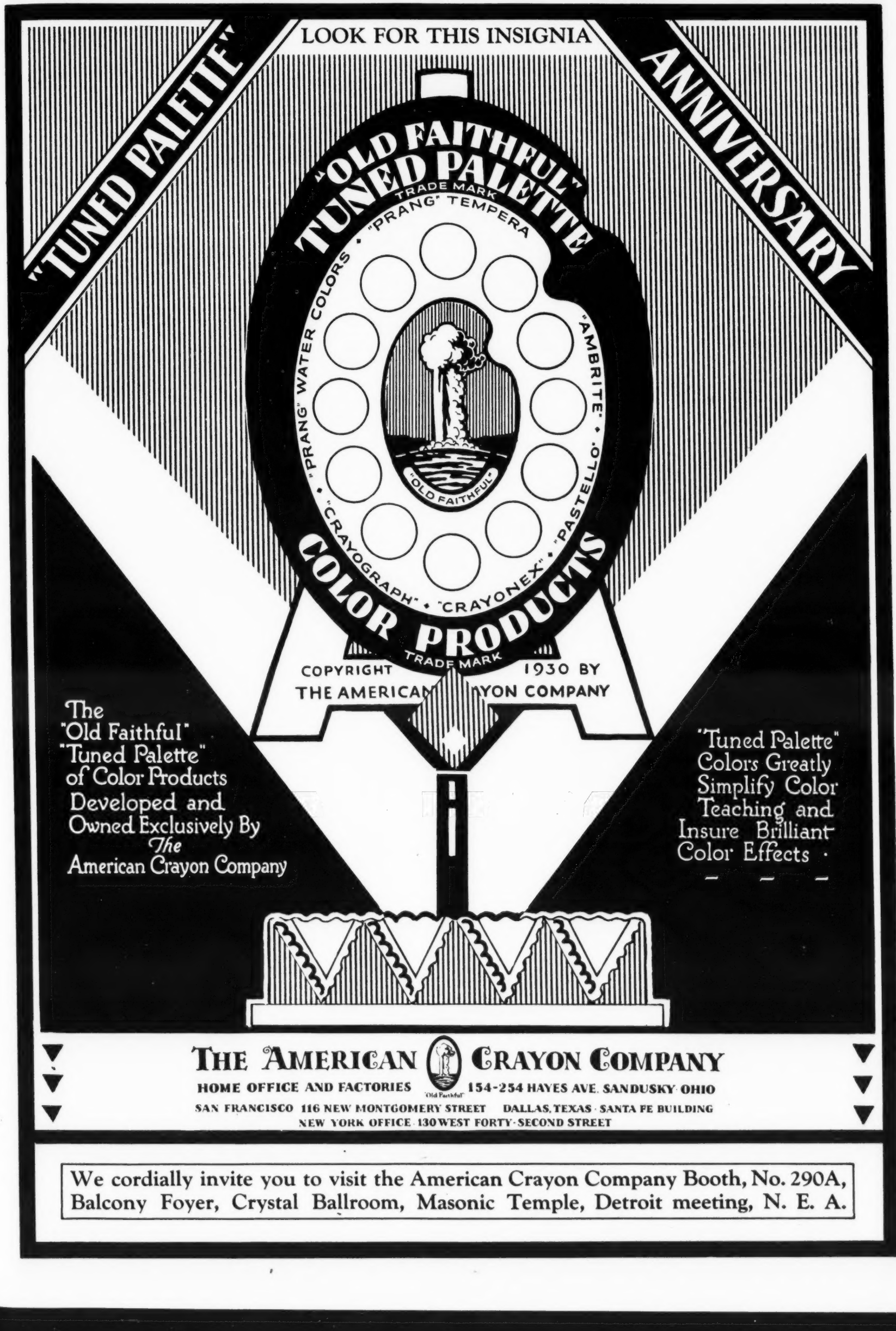
MR. LAYLANDER RETIRES

Mr. O. J. Laylander, who has served for nearly 25 years as manager of the elementary school department of the Chicago office of Ginn and Company, retired on January 1 from active service. His place has been taken by H. P. Conway, who has been connected with the firm for many years and who during the past ten years has been Mr. Laylander's associate.

Mr. Laylander began his career in the textbook publishing field in Iowa during the eighties. His success and popularity led to promotion from the Iowa state agency to general representative of the firm in the middle west. In 1906 he came to Chicago to succeed T. W. Gilson, general manager of the elementary school department. During his many years with the firm he has demonstrated splendid executive ability and has endeared himself not only to his associates but also to thousands of educators in the north central states.

♦ The school board of Youngstown, Ohio, has reëlected MR. L. U. HULIN as president, and MR. W. MEADE PORTER as clerk. MR. GUY OHL was elected vice-president, to succeed Mr. Robert McGhie.

♦ The school board of Chillicothe, Ohio, has reëlected MR. W. H. HERRNSTEIN as president, and MR. W. H. KETTRA as vice-president.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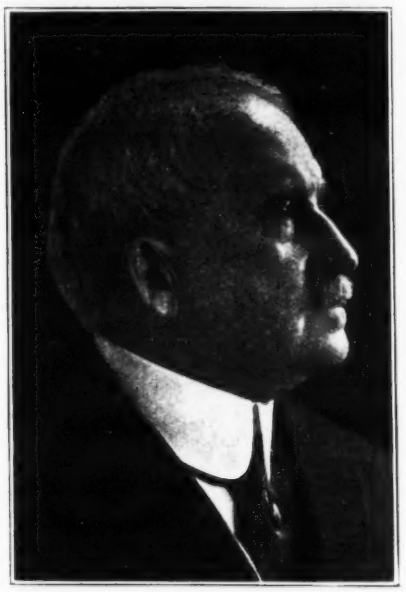
Book News and Reviews

WILLIAM E. PULSIFER PASSES AWAY

One of the oldest and most prominent among the educational publishers, William E. Pulsifer, died on January 4, 1931. He was one of the founders of the firm of D. C. Heath and Company. During the earlier days of the firm's existence, the founders, Heath, Ames, Smythe, and Pulsifer were known as the "Big Four." They were primarily educators, progressive, high-minded, and efficient, who had entered the publishing business to render a broader type of educational service. They commanded the attention of their fellow educators throughout the country. They knew the needs of the school field and came forward with an excellent product.



WILLIAM E. PULSIFER

Mr. Pulsifer was the last of the splendid men who founded a great institution. While the firm had its home office in Boston, Mr. Pulsifer concerned himself with the New York branch and remained active until the close of his career. A vigorous character, of impressive personality, he not only concerned himself with the educational publishing business as such, but also fostered an idealism in the finer aspirations of life. He gave expression to these in numerous lectures and writings. He was identified with various societies and organizations demonstrating his intense interest in all that made for human progress.

William E. Pulsifer was born in West Sumner, Maine, April 16, 1852. He began life as a schoolmaster and joined the late Daniel C. Heath's publishing enterprise in 1889. With his death one of the most attractive figures as well as useful builders in the educational publishing field of America has passed from the scene.

DEFENSE OF TEXTBOOK AUTHORS

Many of the schoolbooks used in the public schools of New York City were written by teachers or officials now in the employ of the school system of that city. In some American cities, textbooks are excluded from the school in which the authors are employed. The school authorities of New York City have never raised the question.

Recently, however, someone outside of the school system has made objections. The Public Education Association holds that authors should be encouraged, rather than discouraged, in the matter of textbook authorship. In its official publication it recently said:

"In the laudable effort to safeguard the public schools from political manipulation, a grave error can be made by objecting to the use of textbooks prepared by members of the staff," says the publication. "In our judgment it seems exceedingly important to encourage, rather than to discourage, every manifestation of professional expression in the public-school system.

"Textbooks for public-school use should, of course, be judged solely on their merits and no improper methods of selling them or urging their use should be tolerated. But no particular virtue accrues to a textbook simply because it comes from a distance; such books should be given all the chance they deserve, but local authors should not be arbitrarily excluded.

"New York City has been fortunate in having an open textbook list which permits outside educators and local school people alike to enter their books on a competitive basis. If improper use of this privilege should be found to exist, it should be treated as a separate incident and not as a pretext for general condemnation of what is, in essence, a very desirable practice. As in appointments, so in textbooks, merit alone should be the criterion."

FACTS ABOUT STATE TEXTBOOK PRINTING

A study on the subject of state textbook publication, made by Dr. Percy R. Davis, has been brought out by the Association of California School Superintendents. The expert sets forth the fact that the state has suffered educationally from the policy of state printing of schoolbooks. He enumerates the objections to the system as follows:

"First, there have been numerous occasions when the state printing plant was unable to supply an adequate number of books that were already in adoption. To quote an investigating committee: 'California at the present time (1929), is unable to furnish a first reader, a third reader, and four copybooks. They were short on geography tests for two years also.'

"Second, unquestionably there have been aggravating delays in supplying the schools with books after a new adoption has been made — days that would never be tolerated were the books being supplied by a commercial publisher.

"Third, schoolbooks are likely to undergo development and improvement with time, so that, generally speaking, the more recent texts are educationally better than the older ones which they displace in most states. Convincing evidence is to the effect that in California, in order to save money in the state printing plant, schoolbooks have been continued in use long after their content has become obsolete and their inadequacy has rendered them valueless in the hands of teachers. W. J. Cooper, now United States Commissioner of Education, toward the end of his superintendency at Fresno, said that the tendency 'to hang on to old plates, regardless of the fact that the information is obsolete,' is 'one of the worst features of state printing,' and he cited specific examples to prove his point.

"Fourth, a very serious charge against state printing of texts in California pertains to the fact that there are at least fifteen reputable and important publishers who refused to lease their book plates for state printing. This number has since been increased, while certain firms have announced their intent hereafter to limit leased books to old editions or to books which for one reason or another do not sell well elsewhere — an announcement that certainly ought to make teachers and parents in California wonder what sort of books the state is securing so cheaply.

"Fifth, as shown by concrete evidence, the development of new and better textbooks is a time-consuming and expensive undertaking. Publishers expect to spend thousands of dollars in the development of important new texts and they expect to wait five, or even ten, years before they have any financial return from their investment. No one will seriously expect the State of California, or any other state, to embark upon any such policy of long-distance, experimental bookmaking. Certainly, if it were undertaken, it would be 'good-by' to economy of a state printing and supply."

NEW BOOKS

Modern History

By C. J. H. Hayes and P. T. Moon. Cloth, 946 pages, illustrated. Price, $2.20. The Macmillan Company, New York City, N. Y.

History is not only written, but must periodically be rewritten. The present volume is a revised and enlarged edition of a former history by the same authors. It might more properly be named Modern European History because the text is confined entirely to the story of the countries of Europe.

The authors in explaining the revision and enlargement of their former book held that the latest results of historical research and scholarship were recognized. In the light of the Great War and the rise of a new Europe the revision was inevitable.

With the passing of time and the crowding of new historic events the old must be weighed and measured in the light of the new. Thus for example, the authors secure a new approach to the Napoleonic wars when compared with the campaigns of Marshall Foch. The partition of Poland in the eighteenth century can now be seen in the light of its restoration in the twentieth, and so on.

The history is divided into six parts. The first deals with background and beginnings, the second with the age of autocracy, and the third with the great revolutions. Part four concerns itself with the struggles in the direction of democracy and self-determination, while part five concerns itself with the white man's burden. Part six sees the world in ferment.

The book is liberally supplied with maps. The illustrations are well chosen.

Illustrated Workbook of United States History

Books I and II. For grades and junior high schools. By Charles A. Coulomb, Ph.D. Paper, 80 pages, illustrated. Price, 44 cents. McKinley Publishing Company, Philadelphia, Pa.

Educators will do well to consider seriously this workbook for their history classes. The excellent illustrations, maps, and reproductions are wordless texts in themselves. Historical topics are divided into important periods preceded with brief outlines, thus giving a bird's-eye view of all related events. Extensive reference books and projects are also suggested. Maps are appropriately printed in blank, with places of cities studied to be filled in by the pupils.

Book I begins with events leading to the discovery of America, and continues with discussions of our country's first settlements, colonial life, the Revolution, new government, Jefferson, War of 1812, industrial and social development to 1820, and finally, the growth of the West. Important historical events from 1829 to 1930 are recorded in Book II. The era of good feeling, Jacksonian democracy, territorial expansion, slavery, Civil War, reconstruction of the Union, industrial distress of 1892, Spanish-American War, World War, and peace are all adequately, yet concisely, viewed.

Work-Test Book in Physics

By A. W. Hurd, Ph.D. Paper, 154 pages. Price, 64 cents. The Macmillan Company, New York, N. Y.

The topics selected for study in this applied-physics manual were chosen because of their relation to the student's environment. This practical aspect of the hydrometer as a measure, machines and their value, principles of fluid pressure in aircraft, color with its phenomena, musical instruments as applications of the laws of sound, manifestations of gravity, and the automobile, is con-

(Continued on Page 138)

THESE ATTRACTIVE, LONG-WEARING TEXTBOOKS are published by the Macmillan Company, New York City . . . each one is bound in durable du Pont Fabrikoid. The two at the top were bound by the American Book Bindery, New York City, and the others by C. B. Fleming & Company, Norwood, Mass.

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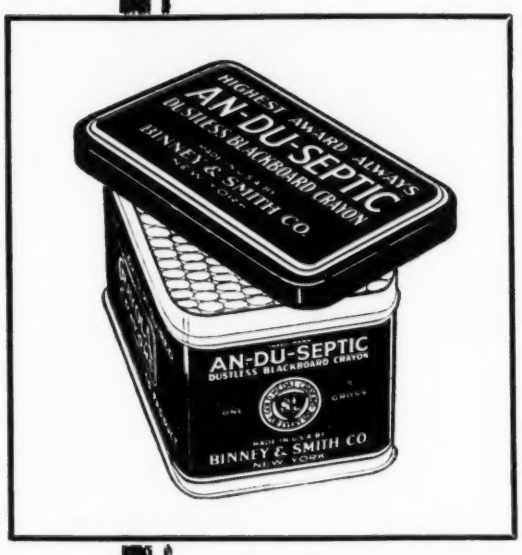

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(Continued from Page 136)

sistently followed throughout. Copious activities, supplementary references, and suggested projects add to the general utility of this modern-approach workbook.

Modern Algebra

By Raleigh Schorling, John R. Clark, and Selma A. Lindell. Cloth, 346 pages. Price, $1.36. Published by World Book Company, Yonkers, N. Y.

This is a third semester book, intended to be used as an intermediate course, namely between the first and second book of the series. The authors, in their preface, hold that the crucial need at the present time is a book for a second course in algebra for pupils who have had courses in grades 7, 8, and 9.

The authors, who are all instructors in higher institutions of learning, believe that the findings of modern psychology should be recognized. Thus a simple, common-sense procedure is employed in the developing of the subject and carrying the same forward through the several stages of the study.

Modern Latin Conversation

By George Capellanus, Ph.D. Cloth, 102 pages. Price, $1.16. Published by The Bruce Publishing Company, Milwaukee, Wis.

This book, namely the non-Latin part, was first written in the German language. Its excellence prompted a translation in English which was made by Bertrand F. Kraus, M.A. The unprecedented success of the book in Germany may be noted in the fact that it is already in its tenth edition. The translator in his preface argues that "the student endeavoring to master the art of speaking a foreign tongue must not find it surprising to be told that he must use the language in speech." The book is intended as a pleasant and helpful companion for high-school students in the study of their Cæsar, Cicero, and Vergil.

It draws the student more intimately into Latin in that it enables him to measure and designate the everyday things about him, and employ the language in his daily contacts. Thus it strengthens his mastery of the Latin and his grasp upon the subjects taught by the great masters.

Practice Sheets in English Grammar and Punctuation

With tests and key. By Harriet R. Lockwood. Paper, 244 pages. Price, 64 cents. American Book Company, Chicago, Ill.

During the course of exercises in this workbook for seventh, eighth, and ninth grades, such important essentials as the sentence, nouns, pronouns, verbs, adjectives, adverbs, prepositions, case, clauses, phrases, and tense are mastered. Attention is concentrated upon common errors, and exercises are arranged with a gradual progression of difficulty. Through a system of grouping, each phase of grammar is organized into a separate unit, with a related mastery test and a key for correction. All exercises are relatively simple, self-corrective, and self-recording, thus relieving the teacher of much detail work and enabling her to spend valuable time on conference or discussion. The manual does not follow a particular textbook and may easily be adapted for use with any English text.

The Dawn of American History Workbook

By William L. Nida and Julia M. Stone. Paper, 119 pages. Price, 48 cents. The Macmillan Company, New York, N. Y.

Individuality is given special consideration in this workbook through the use of blank charts, a ladder of success, a hall of fame, and a roll of honor, to be filled in with names of famous explorers, inventors, and events, selected by the pupil himself with reason for his choice accompanying. Tests included are of true-false, completion, matching, and multiple types. The chief difficulty in this history manual for the upper grades is the complex system entailed in marking. No numerical values are recorded but fractional marks of correct and incorrect, right and wrong, which will require much mathematical work on the part of the teacher for final grading.

My Occupation

A pupil's workbook for the study of vocational life. By Howard C. Hill and Damon H. Sellers. Paper, 229 pages. Price, 80 cents. Ginn and Company, Boston, Mass.

This manual acquaints boys and girls with varied opportunities in industry, business, and the professions through problems and projects. It will aid pupils in selecting and preparing for occupations best suited to their desires and abilities. Under four divisions of prosperity, industry, occupations, and success, the major problems of saving, buying, selling, coöperation, making a living, making a home, and getting a job are discussed from practical angles. Graphs and statistical charts appear frequently and vividly analyze situations through numerical values. The pupil will have a comprehensive knowledge of the world and its work upon completing the work contained here.

The World About Us

By William D. Pulvermacher and Charles H. Vosburgh. Cloth, 382 pages. Published by D. C. Heath & Company, New York, N. Y.

This general-science text, addressed to children in the junior-high-school grades, is both a text and a laboratory manual. The first half of the work, which includes physics and chemistry, is distinctly simple and teachable; the second half is in part equally simple, and in part rather heavy for grade children. The chapters on the function of plants, reproduction, and micro-organisms are in language and content distinctly above the children who are expected to study them.

Nature Study

By John H. Gehrs. Cloth, 208 pages. Published by American Book Company, New York.

This is book two, designed as is book one, for textbook use. The two are entirely independent of each other, each developing in its own way the problems treated.

The present book carries the pupil into the economic and scientific phases of the subject. Thus it deals with order and system in nature, insects, plants, weeds, and the like. Farm life, and its production operations, receives attention. The factors that make for progress as well as its destructive deterrents are dealt with. Animal and plant life are well described. It is intended for use in the elementary classes.

(Continued on Page 141)

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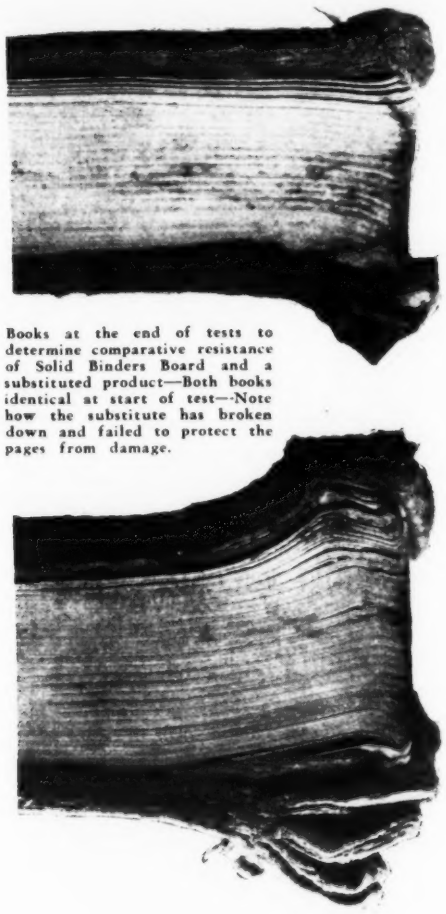

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(Concluded from Page 138)

Directed Study Guides for Stevenson's Treasure Island

By Alma Leonhardy and Grace W. Hogoboom. Paper, 68 pages. Price, 48 cents. The Macmillan Company, New York, N. Y.

This guide loses much of its efficiency since its use is confined by specific references throughout to a lone edition of this popular story — the new pocket classic. Maps and outline drawings are utilized to give a pictorial value to the words read. For each chapter of the book, three suggested exercises are given: a list of words difficult to pronounce, another of those with obscure meanings, and a series of incomplete sentences with blanks to be filled. Many of the assignments are thought provoking and require originality, such as probable dangers encountered in a sea journey, points in favor of the stockade, and possible results of a mutiny. The guide is designed primarily to aid in reading comprehension, and a chart is included in the back of the book for pupils' self-recording of progress.

Workbook in United States History

For higher grades. By Howard E. Wilson and Florence H. Wilson. Paper, 254 pages. Price, 60 cents. American Book Company, Chicago, Ill.

Though specific page references are made to all leading history texts in this workbook for upper grades and junior high school, it may be used with any text. Built on the eight-unit plan, covering important topics of exploration and discovery of America, colonization, wars, growth, progress, slavery, industry, and modern life, the work is a brief but comprehensive record of American civilization. Charts, maps, and exercises afford pupils ample opportunity to display thought and inventiveness. Teachers will appreciate the simple make-up and organization into topical outline of all material in this manual.

Work-Test Manual in American History

Revised edition. By W. A. Butcher, M.A. Paper, 173 pages. Price, 64 cents. The Macmillan Company, New York, N. Y.

This manual enumerates the seven great periods of America as the colonial, conflict and independence, foundations of the union and national life, the West and Jacksonian democracy, sectional conflict and reconstruction, national growth and world politics, and lastly, progressive democracy and the world war. Excellent work sheets accompany each important topic studied, in addition to original themes suggested. Adaptability is an outstanding asset of this manual with references throughout to all important history texts, though not confined to them exclusively. There are no maps, but exercises are correlated and contain cross references thus repeating previous lessons and aiding in pupil mastery. Marking, too, is simple, with no fixed method required but to be determined by the teacher herself.

Elementary Wrought Iron

By J. W. Bollinger. Cloth, 139 pages. Price, $1.32. Published by The Bruce Publishing Company, Milwaukee, Wis.

Recognizing the fact that we are living in an age of steel, and that steel is widely employed in modern industry, and the paraphernalia that surrounds the human family, the author proceeds with his task.

He introduces the student into the purposes of anvil and forge, and the several processes that are employed in turning the crude ore into the finished product. A series of practical operations, such as building a forge fire, measuring and laying off, cutting, tapering, upsetting, flaring, and twisting are described. Then such things as the making of bends over the anvil, shaping an eye, drilling, riveting, threading, brazing, welding, hardening, and tempering of tool steel are taught.

The projects include the use of tools, a description of the several utilities employed and the accessories that enter into the production operations. The text is liberally illumined with drawings.

Sonny Elephant

By Madge A. Bigham. Cloth, 205 pages. Price, 80 cents. Published by Little, Brown and Company, Boston, Mass.

This is a jungle tale. It tells about an elephant family and an Indian boy named Tom-Tom. The elephant parents and their son, a baby elephant, help the Indian boy in his pastimes. There are some adventures, some mishaps, some experiences. Jungle life is interestingly described.

The text is designed to serve juvenile readers. The illustrations, which are done in black, are made by Berta and Elmer Hader.

Adventures in Storyland

By Frances Lillian Taylor. Cloth, 192 pages. Price, 72 cents. Published by Beckley-Cardy Company, Chicago, Ill.

The author calls this a second reader. It contains some 50-odd delightful children's stories. The initial stories deal with safety and health, and the useful things children may do. These are followed by make-believe stories, funny situations, fairy tales, school days, and the like.

Friends at Home and at School

By Margaret L. White and Alice Hawthorn. Cloth, 196 pages, illustrated. Published by the American Book Co., New York, N. Y.

The list of children's friends discussed in this charming first reader include policeman, fireman, postman, milkman, and the like. There are visits to aquariums, dog shows, workshops, and the great outdoors. Mary Alice figures in all these travels, and what a delightful little maiden she is. Her experiences and impressions form the basis for the text and illustrations.

The book continues the method so successfully used in the primers of the *Do and Learn Readers*. The vocabulary is rather the largest which has come to the reviewer's attention.

Shakespeare's The Merchant of Venice

Edited by R. Adelaide Witham. Cloth, 284 pages. Price, 68 cents. Published by Houghton Mifflin Company, Boston, Mass.

One half of this book is given over to the introductory. The editor leads her readers into the Shakespeare atmosphere, describes London and Stratford-on-Avon, the attitude of the public of that day toward the drama, the English plays before Shakespeare's time, etc.

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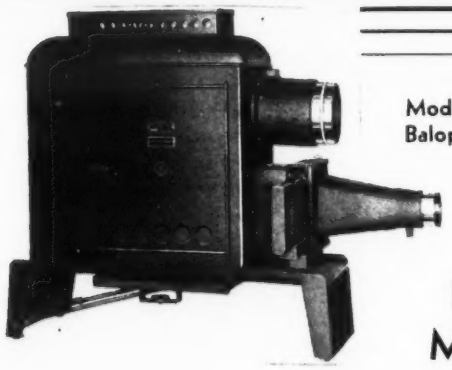

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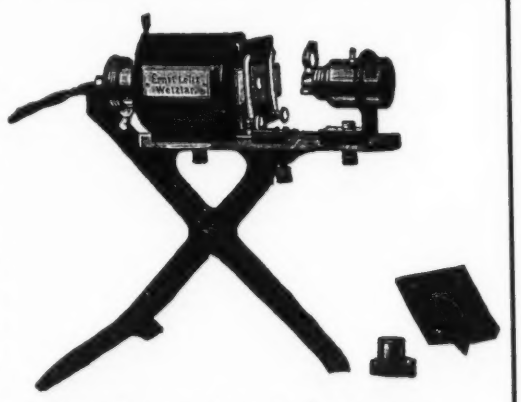

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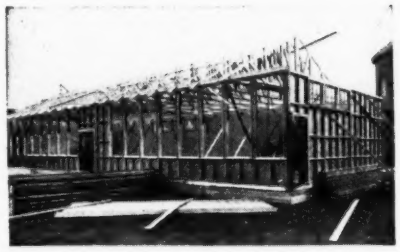

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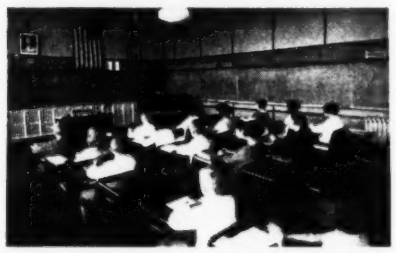

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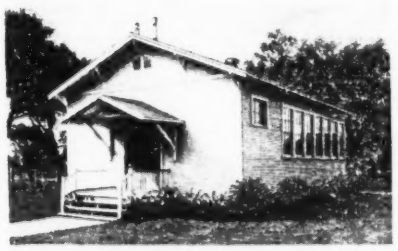

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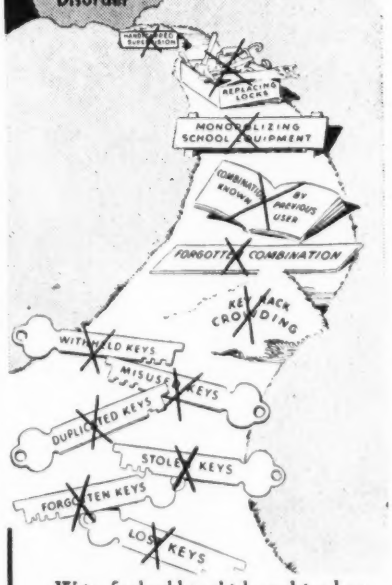

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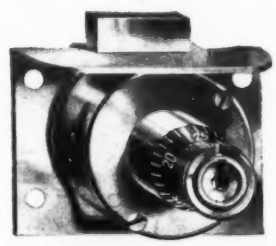

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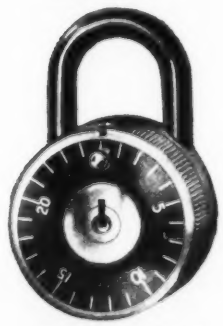

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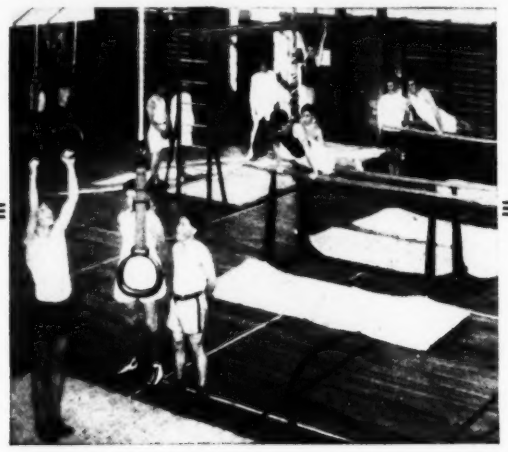

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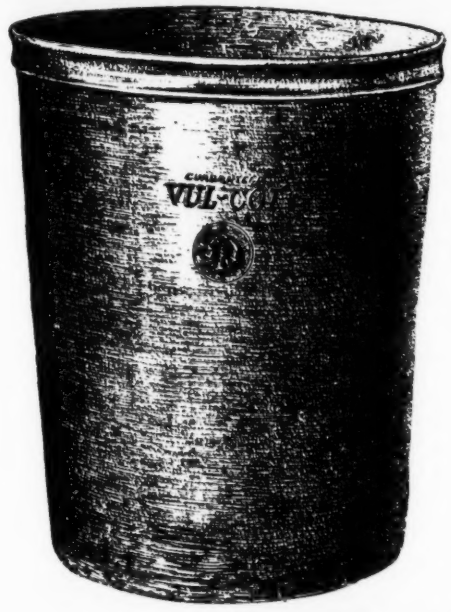

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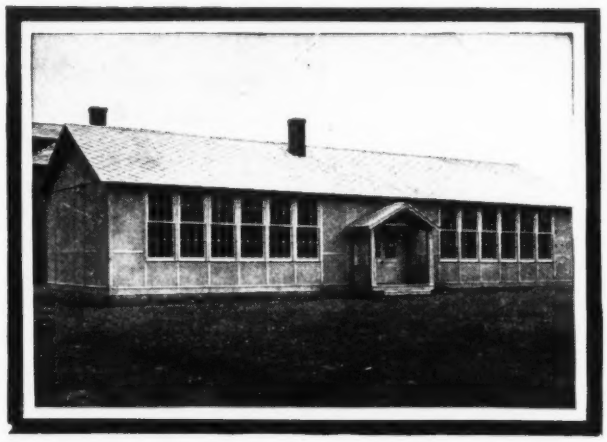

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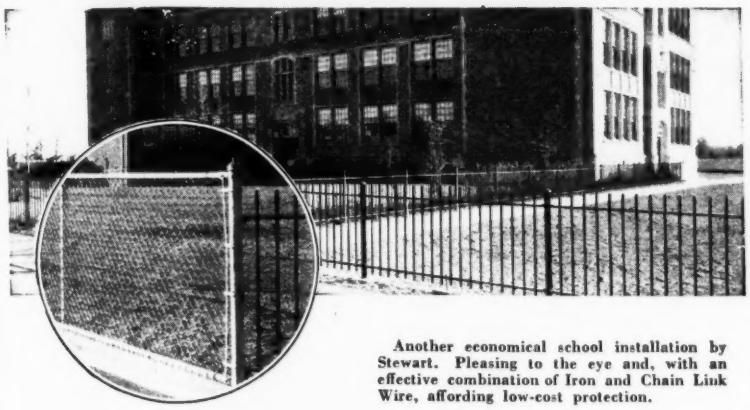

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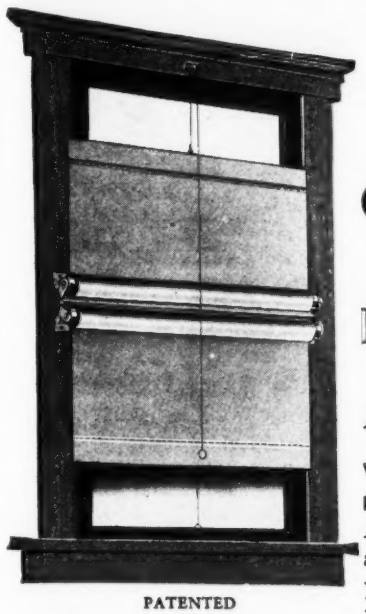

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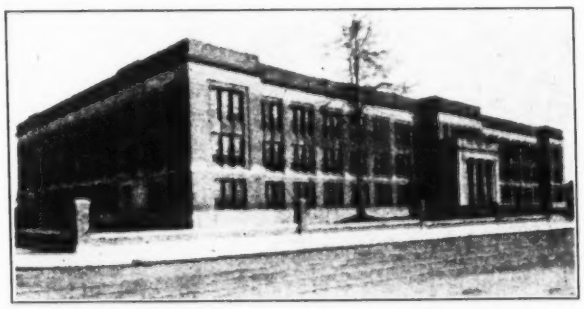

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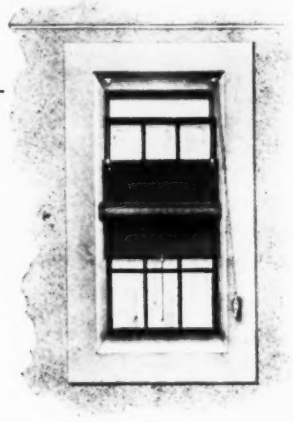

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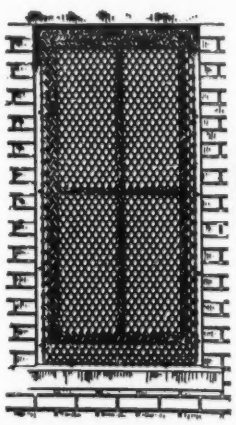

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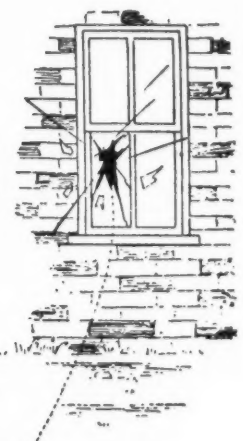

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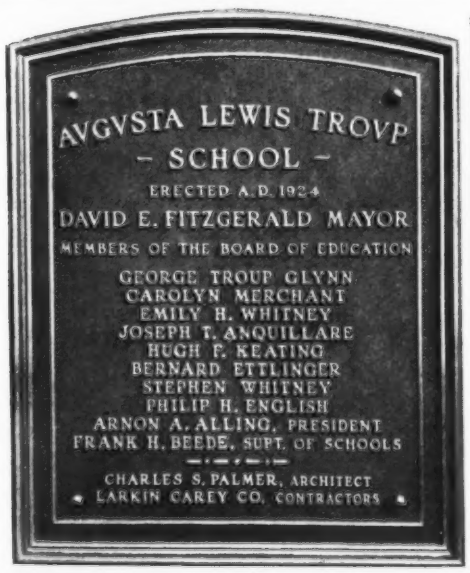

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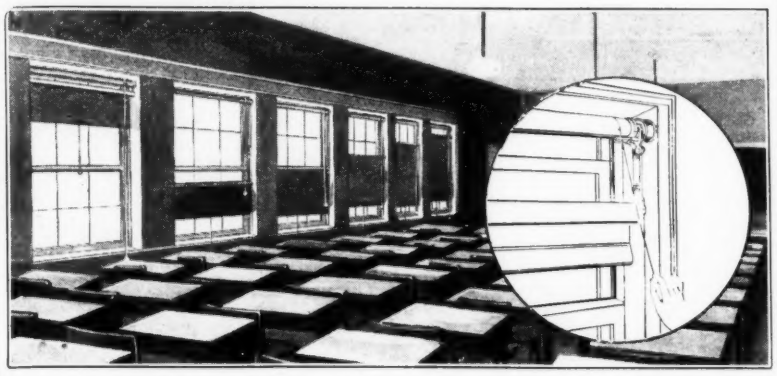

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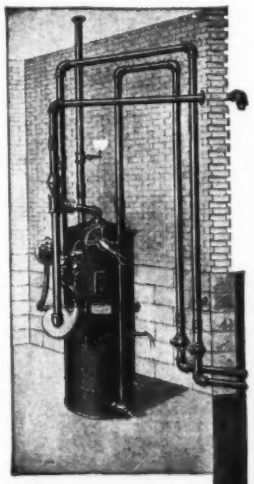

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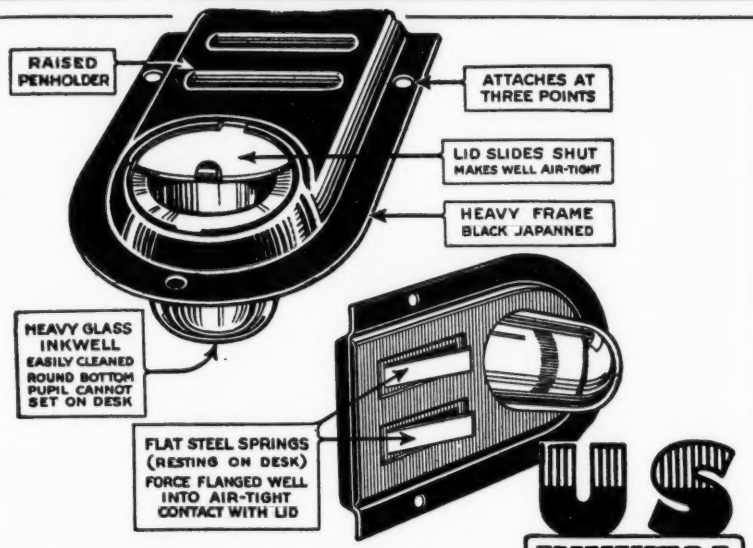

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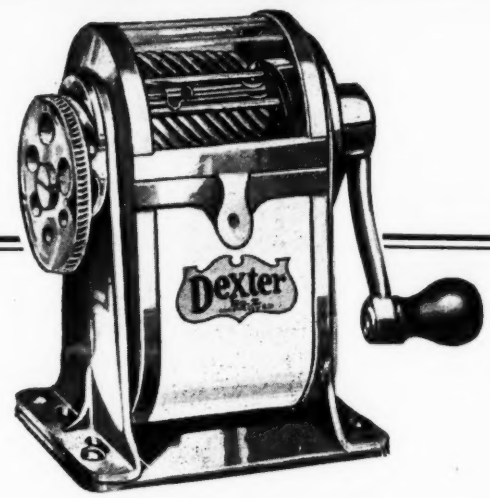

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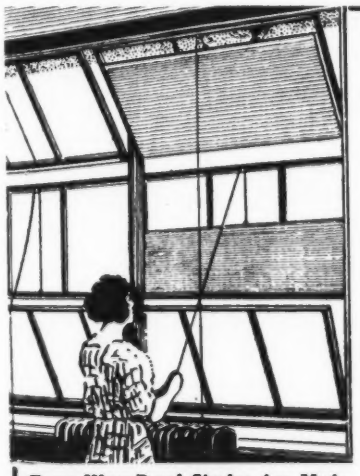

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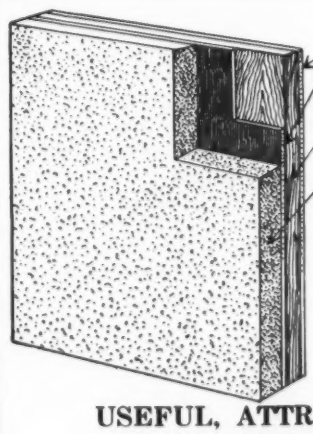

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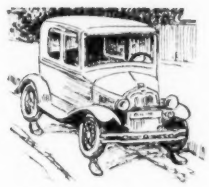

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Weber Costello Co.

CHEMISTRY SUPPLIES
Welch Mfg. Co., W. M.

CLASSROOM FILMS
Eastman Teaching Films, Inc.

CLEANING COMPOUNDS
Continental Chemical Corporation
Hillyard Chemical Co.
Midland Chemical Laboratories
Oakite Products, Inc.
Vestal Chemical Co.

CLOCKS—PROGRAM
International Business Machines Corp.
Murphy-Davis Signal Co.
National Time & Signal Corporation
Standard Electric Time Co.

CLOTH BLACKBOARDS
Beckley-Cardy Company
N. Y. Silicate Book Slate Co.
Weber Costello Company

COMBINATION LOCKS
Corbin Cabinet Lock Company
Dudley Lock Corporation, The
Miller Keyless Lock Co., J. B.
National Lock Co., The

COOKING APPARATUS
Dougherty & Sons, Inc., W. F.

CORK TILE AND CORK CARPET
Congoleum-Nairn, Inc.

CRAYONS
American Crayon Company
Beckley-Cardy Company
Binney & Smith Co.
National Crayon Co.
Rowles Co., E. W. A.
Weber Costello Company
Welch Mfg. Co., W. M.

CRAYON COMPASSES
N. Y. Silicate Book Slate Co.
Weber Costello Company

CRAYON TROUGHS
Dudfield Manufacturing Company
Weber Costello Company

DAMPPROOFING
Sonneborn Sons, L.
Truscon Steel Company
Vortex Mfg. Co.

DEAFENING QUILT
Cabot, Inc., Samuel
Celotex Company, The

DESKS—OFFICE
Beckley-Cardy Company
Imperial Desk Company
Rowles Co., E. W. A.
Welch Mfg. Co., W. M.

DIPLOMAS
Beckley-Cardy Company
Welch Mfg. Co., W. M.

DISHWASHING COMPOUNDS
Midland Chemical Laboratories
Oakite Products, Inc.

DISINFECTANTS
Continental Chemical Corporation
Hillyard Chemical Co.
Midland Chemical Laboratories

DOMESTIC SCIENCE EQUIPMENT
Christiansen, C.
Dougherty & Sons, Inc., W. F.
Kewaunee Mfg. Co.
Kimball Company, W. W.
Peterson & Co., Leonard
Sheldon & Company, E. H.
Van Range Co., The John
Welch Mfg. Co., W. M.

DOORS
Richards-Wilcox Mfg. Co.

DOORS—STEEL-FIREPROOF
Detroit Steel Products Co.
Truscon Steel Company

DRAFTING DEPT. FURNITURE
Christiansen, C.
Kewaunee Mfg. Company
Rowles Co., E. W. A.
Sheldon & Company, E. H.
Welch Mfg. Co., W. M.

DRIERS—HAND AND FACE
Chicago Hardware Foundry Co.

DRINKING FOUNTAINS
Clow & Sons, James B.
Crane Co.
Rundle-Spence Mfg. Company
Taylor Company, Halsey W.

DUPLICATORS
Dick Co., A. B.
Standard Mailing Machines Co.

ELECTRICAL EQUIPMENT
Westinghouse Electric & Mfg. Co.

ELECTRICAL REFRIGERATION
General Electric Company

ELECTRIC DRIERS
Chicago Hardware Foundry Co.

ELECTRIC HAND SAWS
Skilsaw, Inc.

ENGRAVERS
Premier Engraving Company

ERASERS
Beckley-Cardy Company
Rowles Co., E. W. A.
Weber Costello Co.

ERASER CLEANERS
Weber Costello Company

FENCES
American Wire Fence Company
Anchor Post Fence Company
Continental Steel Corporation
Cyclone Fence Co.
Page Fence Association
Stewart Iron Works Co., The
Wayne Iron Works
Wickwire Spencer Steel Company

FILING SYSTEMS
Remington-Rand Business Service, Inc.

FIRE ALARM SYSTEMS
International Business Machines Corp.
Standard Electric Time Company

FIRE ESCAPES
Butler Mfg. Co.
Potter Manufacturing Corp.

FIRE EXIT LATCHES
Potter Manufacturing Corp.
Steffens-Amberg Company
Vonnegut Hardware Co.

FIRE INSURANCE
Home Insurance Company, The

FIREPROOF DOORS
Detroit Steel Products Co.
Truscon Steel Company

FIREPROOFING MATERIALS
Asbestos Buildings Company

FLAGS
Annin & Co.

FLAG POLES
Bliefeld & Company, Otto
Rowles Co., E. W. A.

FLOOR COVERING
Armstrong Cork & Insulation Co.
Congoleum-Nairn, Inc.
Heywood-Wakefield Co.
Sloane Co., W. & J.

FLOOR FINISHES
Churchill Manufacturing Co.
Continental Chemical Corporation
Hild Floor Machine Co.
Midland Chemical Laboratories
Sonneborn Sons, Inc., L.
Vestal Chemical Co.
Wis-Co-Lac Co., The

FLOORING
Carter Bloxonend Flooring Co.
Cellized Oak Flooring, Inc.
Congoleum-Nairn, Inc.
Truscon Steel Company

FLOORING—COMPOSITION
Congoleum-Nairn, Inc.

FLOOR SCRUBBING EQUIPMENT
Finnell System, Inc.
Hild Floor Machine Co.

FLOORS, STEEL FIREPROOF
Truscon Steel Company

FLOOR TILES
Congoleum-Nairn, Inc.
Norton Company

FLOOR TREATMENTS
Churchill Manufacturing Co.
Continental Chemical Corporation
Hillyard Chemical Co.
Midland Chemical Laboratories
Sonneborn Sons, L.
Vestal Chemical Co.

FLOOR TREATING COMPOUNDS
Continental Chemical Corporation
Hillyard Chemical Co.
Sonneborn Sons, Inc., L.

FLOOR WAX
Johnson & Son, S. C.

FLUSH VALVES
Clow & Sons, James B.
Crane Co.
Sloan Valve Company

FOLDING CHAIRS
Clarin Mfg. Company
Derby Company, P.
Mahoney Chair Company, The
Maple City Stamping Company
Northern Corrugating Co.
Peabody Seating Co.
Rastetter & Sons Co., Louis
Rowles Co., E. W. A.
Royal Metal Mfg. Co.
Standard Mfg. Company
Tucker Duck & Rubber Co.
Welch Mfg. Co., W. M.

FOLDING PARTITIONS
Horn Folding Partition Co.
Park, Winton & True Co.
Richards-Wilcox Mfg. Co.
Wilson Corp., Jas. G.

FURNTURE
Algoma Wood Products Co.
American Seating Co.
Andrews Co., The A. H.
Beckley-Cardy Company
Columbia School Supply Company
Deskor Chair Sales Corp.
Heywood-Wakefield Co.
Imperial Desk Company
Kenney Bros. & Wolkins, Inc.
Kewaunee Mfg. Company
Kimball Company, W. W.
Kundtz Co., The Theo.
Maple City Stamping Company
National School Equipment Co.
Peabody Seating Co.
Remington-Rand Business Service, Inc.
Rowles Co., E. W. A.
Royal Metal Mfg. Co.
Sheldon & Company, E. H.
Sjostrom Co., John E.
Standard School Equipment Co.
Standard School Fixtures Co.
Thonet Brothers, Inc.
Wark-Beacon Steel Furniture Co.
Welch Mfg. Co., W. M.

GAS MACHINES
Matthews Gas Machine Co.

GLASS
Libbey-Owens-Ford Glass Co.
Manufacturers Glass Company

GLOBES
Beckley-Cardy Company
Rand, McNally & Co.
Weber Costello Company

GRANDSTANDS
Pittsburgh-Des Moines Steel Co.
Wayne Iron Works

GYMNASIUM APPARATUS
Chicago Gymnasium Equipment Co.
Narragansett Machine Company

GYMNASIUM FLOORING
Carter Bloxonend Flooring Co.
Cellized Oak Flooring, Inc.

GYMNASIUM LOCKERS (STEEL)
Durabilt Steel Locker Co.

HAIR DRIER
Chicago Hardware Foundry Co.
(Sani-Dri Division)

HEATING SYSTEMS
American Blower Company
Buckeye Blower Co.
Clow & Sons, Jas. B. ("Gasteam")
Crane Company
Heggie Simplex Boiler Company
Nelson Corp., The Herman
Peerless Unit Ventilation Co., Inc.
Sturtevant Co., B. F.

INKS
American Crayon Company
Sanford Mfg. Co.

INKWELLS
Sengbusch Self-Closing Inkstand Co.
Squires Inkwell Company
Tannewitz Works, The
U. S. Inkwell Company

INSULATION
Armstrong Cork & Insulation Co.

JANITORS' SUPPLIES
Continental Chemical Corporation
Dougherty & Sons, Inc., W. F.
Hild Floor Machine Co.
Midland Chemical Laboratories
Oakite Products, Inc.
Sonneborn Sons, L.
Welch Mfg. Co., W. M.

KEY CONTROL SYSTEMS
Thayer Tel-Kee Corporation

KEYLESS LOCKS
Corbin Cabinet Lock Company
Dudley Lock Corporation
Miller Keyless Lock Co., J. B.
National Lock Co., The

KITCHEN EQUIPMENT
Van Range Co., The John

LABORATORY APPARATUS
International Business Machines Corp.
Leitz, Inc., E.
Standard Electric Time Company
Welch Mfg. Co., W. M.

LABORATORY FURNITURE
Alberene Stone Company
Columbia School Supply Company
Kewaunee Mfg. Company
Kimball Company, W. W.
Peterson & Co., Leonard
Sheldon & Company, E. H.
Welch Mfg. Co., W. M.

LADDERS
Dayton Safety Ladder Co., The

LANTERN SLIDES
Keystone View Company
Victor Animatograph Corporation
Welch Mfg. Co., W. M.

LAWN MOWERS
Ideal Power Lawn Mower Co.

LIBRARY FURNITURE
Demco Library Supplies
Kewaunee Mfg. Company
Kimball Company, W. W.
Peterson & Company, Leonard
Remington-Rand Business Service, Inc.
Sheldon & Company, E. H.
Sjostrom Co., John E.
Welch Mfg. Co., W. M.

LIBRARY SUPPLIES
Demco Library Supplies

LIGHTING FIXTURES
Gleason-Tiebout Glass Co.
Graybar Electric Co., Inc.
Holophane Company, Inc.

LINOLEUMS
Congoleum-Nairn, Inc.
Sloane Co., W. & J.

LIQUID FLOOR HARDENER
Sonneborn Sons, L.

LIQUID SOAPS
Continental Chemical Corporation
Huntington Laboratories
Midland Chemical Laboratories
Vestal Chemical Co.

LOCKERS—STEEL
Berger Manufacturing Comapny
Durabilt Steel Locker Co.
Lyon Metal Products, Inc
Narragansett Machine Company

LOCKS—KEYLESS
Corbin Cabinet Lock Company
Dudley Lock Corporation, The
Miller Keyless Lock Co., J. B.
National Lock Co., The

MAPS
Beckley-Cardy Company
Rand, McNally & Co.
Rowles Co., E. W. A.
Weber Costello Company
Welch Mfg. Co., W. M.

MEMORIAL TABLETS
Russell & Sons Co., Albert

METAL BLACKBOARD TRIM
Dudfield Manufacturing Company
Truscon Steel Company

METAL LATH
Berger Manufacturing Company
Truscon Steel Company

MICROSCOPES
Bausch & Lomb Optical Co.
Leitz, Inc., E.
Spencer Lens Company
Welch Mfg. Co., W. M.

MIMEOGRAPHS
Dick Co., A. B.

MODELING CLAY
American Crayon Company

MOTION PICTURE MACHINES
Eastman Teaching Films, Inc.
Victor Animatograph Corporation

OPERA CHAIRS
Rowles Co., E. W. A.

PAINTS
American Crayon Company
Sonneborn Sons, L.
U. S. Gutta Percha Paint Co.
Vortex Mfg. Co.

PAINTS—TECHNICAL
Sonneborn Sons, Inc., L.
Truscon Steel Company

PAINT SPRAYING EQUIPMENT
DeVilbiss Mfg. Co., The
Vortex Mfg. Co.

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Exhibitors at Detroit

The following list of manufacturers, publishers, and dealers have reserved space at the Detroit convention of the Department of Superintendence, in the Halls of the Masonic Temple, February 21–26, inclusive:

Aero Globe Co., 2005 Rockwell Ave., Cleveland, Ohio. Globes and teaching materials relating to geography.

Alberene Stone Co., 153 West 23rd St., New York, N. Y.—Sinks, table tops, and other laboratory apparatus manufactured of Alberene stone.

Albert Teachers' Agency, 25 East Jackson Blvd., Chicago, Ill.—Teacher personnel service.

Allyn & Bacon, 50 Beacon St., Boston, Mass.—Educational textbooks and reference books.

American Abrasive Metals Company, 50 Church St., New York.—Anti-slip products for schools walkways.

American Crayon Co., 136 Hayes Ave., Sandusky, Ohio.—Chalk, crayons and art materials.

American Education Press, 40 South Third St., Columbus, Ohio.—Educational publications.

American School and University, 470 Fourth Ave., New York.—Educational publications.

American Seating Co., 14 E. Jackson Blvd., Chicago, Ill.—Classroom and auditorium seating and furniture.

American Type Founders Co., 300 Communipaw Ave., Jersey City, N. J.—Materials for teaching printing.

A. H. Andrews Co., 107 So. Wabash Ave., Chicago, Ill.—School furniture and supplies.

D. Appleton and Co., 35 West 32nd St., New York City.—School textbooks.

Arlington Seating Co., Arlington, Ill.—School furniture and seating.

Arlo Pub. Co., Newton Upper Falls, Mass.—Educational publications.

Art Extension Press, Inc., Westport, Conn.—Education art publications.

Atwater Kent Mfg. Co., 4700 Wissahickon Ave., Philadelphia.—Radios.

Augsburg Publishing Co., Morristown, Tenn.—Educational art publications.

Automatic Pencil Sharpener Co., 58 E. Washington St., Chicago.—Pencil sharpeners.

L. C. Balfour Co., 25 County St., Attleboro, Mass.—School jewelry and commencement supplies.

A. S. Barnes Co., 67 W. 44th St., New York City.—Textbook publishers.

Barrett Lock Co., 4720 N. 18th St., Philadelphia, Pa.—Keyless locks.

Bausch and Lomb Optical Co., Rochester, N. Y.—Laboratory instruments.

Beck Duplicator Co., 18 West 18th St., New York City.—Duplicators.

Beckley-Cardy Co., 17 East 23rd St., Chicago.—Educational publishers and supply dealers.

Binney and Smith Co., 41 East 42nd St., New York City.—Drawing crayons and art materials.

Blakiston's Son and Co., P, 1012 Walnut St., Philadelphia, Pa.—Educational publishers.

Bobbs-Merrill Co., Indianapolis, Ind.—Educational publishers.

Books for Children, 360 N. Michigan Ave., Chicago.—Publishers.

Bradley Co., Milton, 74 Park St., Springfield, Mass.—Kindergarten supplies and art materials.

Brown Robertson Co., 424 Madison Ave., New York City.—Art publishers.

The Bruce Publishing Co., Milwaukee, Wis.—Educational textbooks and periodicals.

Buckeye Blower Co., 400 Dublin Ave., Columbus, Ohio.—Unit ventilators.

Burroughs Adding Machine Co., 6071 Second Blvd., Detroit, Mich.—Adding machines.

Cable Co., 57 E. Jackson Blvd., Chicago, Ill.—Pianos and laboratory furniture.

Caproni and Bro., P. P., 1920 Washington St., Boston, Mass.—Statuary.

Carter Bloxonend Flooring Co., 902 Walnut St., Kansas City, Mo.—Gymnasium and school-shop flooring.

Celotex Co., 919 N. Michigan Ave., Chicago.—Acoustical control material.

Central Scientific Co., 460 E. Ohio St., Chicago, Ill.—Scientific equipment.
equipment.

Chicago Apparatus Co., 1735 W. Ashland Ave., Chicago, Ill.—Scientific equipment and apparatus.

Chicago Gymnasium Equipment Co., 1835 W. Lake St., Chicago, Ill.—Gymnasium equipment.

Chicago Statuary Mfg. Co., 401 N. Desplaines St., Chicago, Ill.—Statuary.

Childhood Education, River Road, Cos Cob, Conn.

Children's Flower Mission, 5700 Detroit Ave., Cleveland, Ohio.—Seeds.

Circle A Products Co., Newcastle, Ind.—Folding partitions and portable schoolhouses and bleachers.

Clarin Mfg. Co., 4640 W. Harrison St., Chicago, Ill.—Folding chairs.

Clay-Adams Co., 117 E. 24th St., New York City.—Educational and scientific models.

Colgate-Palmolive-Peet Co., 919 N. Michigan Ave., Chicago, Ill.—Soaps and cleaning preparations.

Compton, J. E. Co., 1000 N. Dearborn St., Chicago, Ill.—Reference books.

Continental Chemical Corporation, Watseka, Ill.—Floor-cleaning materials and sanitary supplies.

Demco Library Supplies, 114 So. Carroll St., Madison, Wis.—Library supplies.

De Moulin Bros. Co., Greenville, Ill.—Caps, gowns, and uniforms.

Dennison Mfg. Co., 300 Howard St., Framingham, Mass.—Paper arts and crafts.

Denoyer-Geppert Co., 5235 Ravenswood Ave., Chicago, Ill.—Educational models and charts.

Derby Co., P., 1 Park Ave., New York.—Chairs and school furniture.

Deskor Chair Sales Corp., Park Square Bldg., Boston, Mass.—Chairs and school furniture.

De Vry Corp., 330 N. Michigan Ave., Chicago.—Motion-picture apparatus and supplies.

Dick, A. B. Co., 720 W. Jackson Blvd., Chicago.—Mimeographs.

Dictaphone Sales Corp., 420 Lexington Ave., New York.—Dictaphones.

Ditson, Oliver, Co., 179 Tremont St., Boston, Mass.—School music.

Ditto Inc., Harrison at Oakley Blvd., Chicago.—Duplicators.

Dobson Evans Co., 305 No. Front St., Columbus, Ohio.—School supplies and equipment.

Dodge Bros., 7900 Ivo Campan Ave., Detroit, Mich.—School busses.

Doubleday-Doran Co., Inc., Garden City, N. Y.—Educational publishers.

Draper Shade Co., Spiceland, Ind.—Adjustable window shades.

Dudley Lock Corp., 26 N. Franklin St., Chicago.—Locks and padlocks.

Dutton, E. P., Inc., 300 Fourth Ave., N. Y.—Educational publishers.

Eastman Teaching Films, Inc., 343 State St., Rochester, N. Y.—Teaching films.

Educational Publishing Corp., 2510 Prairie Ave., Chicago.—Publishers.

Educational Test Bureau, University and 15th Aves., S.E., Minneapolis, Minn.—Test materials.

Electric Research Products, Inc., 250 West 57th St., New York.—Sound system and radios.

Esterbrook Steel Pen Mfg. Co., Cooper St. and Delaware Ave., Camden, N. J.—Pens.

Faber Pencil Co., 27 Greenpoint Ave., Brooklyn, N. Y.—Pencils and colored crayons.

Fales Units, Inc., 25 Church St., New York City.

Finnell System, Inc., Elkhart, Ind.—Floor-cleaning machines and materials.

Fischer, Carl, Inc., 711 Fifth Ave., New York.

Fisk Teachers Agency, 28 E. Jackson Blvd., Chicago, Ill.—Personnel service.

Forse Mfg. Co., Anderson, Ind.—Adjustable window shades.

Foundation Press, Inc., 501 Bulkley Bldg., Cleveland, Ohio.—Educational publishers.

Frontier Press Co., 800 Lafayette Bldg., Buffalo, N. Y.—Educational reference books.

Garrigue Collapsible Globe Corp., 69 Bank St., New York.—Globes and maps.

Gaylord Bros., Inc., 155 Gifford St., Syracuse, N. Y.—Library supplies.

Grant Mfg., Co., Council Bluffs, Iowa.—Playground

Ginn and Co., 15 Ashburton Place, Boston, Mass.—Educational publishers.

Gregg Publishing Co., 2500 Prairie Ave., Chicago, Ill.—Business books.

Grigsby-Grunow Co., 5801 Dickens Ave., Chicago, Ill.—Radios.

Grolier Society, 2 West 45th St., New York.—Reference books.

Hale Co., E. M., 3202 Cherry St., Milwaukee, Wis.—School supplies.

Hale-Haas Corp., Eau Claire, Wis.—School supplies.

Hall and McCreary Co., 434 South Wabash Ave., Chicago, Ill.—Publishers.

Harcourt, Brace, & Co., 383 Madison Ave., New York—Publishers.

Harter School Publishing Co., 2046 E. 71st St., Cleveland, Ohio—Construction materials.

Heyer Duplicator Co., Inc., 911 W. Jackson Blvd., Chicago, Ill.—Duplicators.

Heywood-Wakefield Co., 113 West Conway St., Baltimore, Md.—School furniture and seating.

Hild Floor Machine Co., 108 West Lake St., Chicago, Ill.—Floor-cleaning machines.

Hillsdale School Supply Co., Hillsdale, Mich.—School supplies.

Hillyard Chemical Co., St. Joseph, Mo.—Cleaning and scrubbing materials.

Holden Patent Book Cover Co., 53 Hilman St., Springfield, Mass.—Book covers.

Holmes Co., Warren S., 112 E. Allegan St., Lansing, Mich.—Architects.

Holton Co., Frank, Elkhorn, Wis.—Musical instruments.

Houghton Mifflin Co., 2500 Prairie Ave., Chicago, Ill.—Educational publishers.

Hughes Co., Marshall, 2233 Grand Ave., Kansas City, Mo.

Huntington Laboratories, Inc., Huntington, Ind.—Cleaning materials.

Ideal School Supply Co., 8316 Brickoff Ave., Chicago, Ill.—Kindergarten furniture and primary supplies.

International Time Recording Co., 270 Broadway, New York, N. Y.—Time and program systems.

Iroquois Publishing Co., Inc., Syracuse, N. Y.—Educational textbooks and book covers.

Johns-Manville Corporation, 292 Madison Ave., New York, N. Y.—Acoustical engineers.

Kenney Bros. & Wolkins, Inc., 716 Columbus Ave., Boston, Mass.—School and auditorium furniture.

Kent Co., Inc., The, Rome, New York—Vacuum cleaning systems.

Kewaunee Mfg. Co., Kewaunee, Wis.—Laboratory and special school furniture.

Keystone View Co., Meadville, Pa.—Visual education equipment.

Kundtz Co., Theo., Main and Elm Sts., Cleveland, Ohio—School furniture and seating.

Laidlaw Bros., 36 West 24th St., New York, N. Y.—Educational publishers.

Lane, Davenport & Bennett, Inc., 1017 Charlevoix Bldg., Detroit, Mich.

Laurel Book Co., 325 South Market St., Chicago, Ill.—Educational publishers.

Lawler Co., S .C., 122 North Curtis St., Chicago, Ill.—Floor cleaning machines.

Leitz Co., E., 60 East Tenth St., New York, N. Y.—Scientific instruments.

Lippincott Co., J. B., 1249 South Wabash Ave., Chicago, Ill.—Educational publishers.

Little, Brown & Co., 34 Beacon St., Boston, Mass.—Educational publishers.

Llewellyn Co., J. C., 38 South Dearborn St., Chicago, Ill.—School architects.

Longmans, Green & Co., 55 Fifth Ave., New York, N. Y.—Educational publishers.

Lyon Metal Products Co., Aurora, Ill.—Metal furniture and lockers.

Lyons & Carnahan, 221 East 20th St., Chicago, Ill.—Educational publishers.

Macmillan Co., 60 Fifth Ave., New York, N. Y.—Educational publishers.

Manual Arts Press, Peoria, Ill.—Educational publishers.

Maxwell Co., S. A., 3636 South Iron St., Chicago, Ill.—Window shades.

McGraw-Hill Book Co., 370 Seventh Ave., New York, N. Y.—Educational publishers.

McKnight & McKnight, 109 West Market St., Bloomington, Ill.—Educational publishers.

Merriam Co., G. & C., 10 Broadway, Springfield, Mass.—Webster dictionaries.

Metropolitan Life Insurance Co., 1 Madison Ave., New York, N. Y.

Midland Press, 1811 Prairie Ave., Chicago, Ill.

Mills Co., 965 Wayside Road, Cleveland, Ohio—Metal toilet partitions.

Moore Co., E R., 832 Dakin St., Chicago, Ill.

Multiplex Display Fixture Co., 918 North Tenth St., St. Louis, Mo.—Display fixtures.

Multistamp Co., The, Norfolk, Va.

National Association of Teachers' Agencies, 64 East Jackson Blvd., Chicago, Ill.

National School Equipment Co., Port Washington, Wis.—School furniture and seating.

National School Supply Association, 176 West Adams St., Chicago, Ill.

Nation's Schools Publishing Co., Chicago, Ill.—Educational periodical.

Natural Slate Blackboard Co., Pen Argyl, Pa.—Blackboards and structural slate.

Nelson Corp., Herman, 1824 Third Ave., Moline, Ill.—Heating and ventilating equipment—univents.

Nelson & Sons, Thos., 381 Fourth Ave., New York, N. Y.—Publishers.

Nesbitt, Inc., J. J., Holmesburg, Philadelphia, Pa.—Unit ventilators.

Noble and Noble, 76 Fifth Ave., New York, N. Y.—Publishers.

Norton Door Closer Co., 2900 North Western Ave., Chicago, Ill.—Door closers.

Nystrom Co., A. J., 3333 Elston Ave., Chicago, Ill.—Maps and geographical supplies.

Owen Publishing Co., F. A., Dansville, N. Y.—Educational publishers.

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Directory of Equipment and Supplies

(Continued from Page 153)

PANIC EXIT DEVICES
Potter Manufacturing Corp.
Steffens-Amberg Company
Vonnegut Hardware Company

PAPER
American Crayon Company
Beckley-Cardy Company

PENCILS
American Crayon Company

PENCIL SHARPENERS
Automatic Pencil Sharpener Co.

PHYSICS EQUIPMENT
Welch Mfg. Co., W. M.

PIANOS
Kimball Company, W. W.

PLAYGROUND APPARATUS
Chicago Gymnasium Equipment Co.
Hill-Standard Company
Narragansett Machine Company
Potter Manufacturing Corp.

PLAYGROUND ENCLOSURES
American Wire Fence Company
Anchor Post Fence Company
Continental Steel Corporation
Cyclone Fence Co.
Page Fence Association
Stewart Iron Works Co., The
Wickwire Spencer Steel Company

PLUMBING FIXTURES
Clow & Sons, James B.
Crane Company
Hoffmann & Billings Mfg. Co.
Rundle-Spence Mfg. Company
Sloan Valve Company
Vogel Company, Joseph A.

POINTERS
N. Y. Silicate Book Slate Co.
Weber Costello Company

POLISHING AND WAXING EQUIP.
Finnell System, Inc.
Hild Floor Machine Co.

PORTABLE BLEACHERS
Circle A Products Corp.
Pittsburgh-Des Moines Steel Co.
Universal Equipment Co.
Wayne Iron Works

PORTABLE SCHOOLHOUSES
American Builders, Inc.
Asbestos Buildings Co.
Circle A Products Corporation
Harris Brothers Company

PROJECTION LANTERNS
Beseler Co., Charles
Spencer Lens Co.
Victor Animatograph Corporation

PROJECTION MACHINES
Eastman Teaching Films, Inc.
RCA Photophone, Inc.

PROJECTORS
Bausch & Lomb Optical Co.

PUBLIC ADDRESS SYSTEMS
Baritone Mfg. Co.
Graybar Electric Co., Inc.
International Business Machines Corp.
Multi-Selecto Phonograph, Inc.
Western Electric Co.

PUMPS—Vacuum, Condensation, Centrifugal, Sump
Nash Engineering Co.

PUPILS' DESKS
Rowles Co., E. W. A.

RACKS, GYM. BASKET (STEEL)
Durabilt Steel Locker Co.

RADIOS
Multi-Selecto Phonograph, Inc.
RCA Victor Corp.

RANGES
Van Range Co., The John
Westinghouse Electric & Mfg. Co.

RECORD SYSTEMS
Remington-Rand Business Service, Inc.

REFRIGERATION
General Electric Company

RE-INFORCED STEEL
Berger Mfg. Company
Truscon Steel Co.

REPRODUCTION SYSTEMS
Western Electric Company

ROLLING PARTITIONS
Wilson Corp., Jas. G.

SAFETY STAIR TREADS
American Abrasive Metals Co.

SANDERS
Hild Floor Machine Co.

SASH OPERATING DEVICES, STEEL
Detroit Steel Products Co.
Truscon Steel Company

SCIENTIFIC APPARATUS
Rowles Co., E. W. A.
Standard Electric Time Company
Welch Mfg. Co., W. M.

SCREENS—PICTURE
Eastman Teaching Films, Inc.

SCRUBBING EQUIPMENT
Continental Chemical Corp.

SEWAGE EJECTORS
Nash Engineering Co.

SEWING MACHINES
Singer Sewing Machine Co.

SHADE ADJUSTERS
Eveleth Mfg. Co

SHEARS AND SCISSORS
Acme Shear Co

SHOE LOCKERS (STEEL)
Durabilt Steel Locker Co.

SHOWERS
Clow & Sons, James B.
Crane Co.
Hoffmann & Billings Mfg. Co.

SIGNS
Russell & Sons Co., Albert

SLATED CLOTH
Beckley-Cardy Company
N. Y. Silicate Book Slate Co.
Rowles Co., E. W. A.
Weber Costello Company

SOUND PICTURES
Electrical Research Products, Inc.
RCA Photophone, Inc.

SOUND SYSTEMS
Baritone Mfg. Co.
Electrical Research Products, Inc.
Multi-Selecto Phonograph, Inc.

SPRAY PAINTING EQUIPMENT
DeVilbiss Mfg. Co., The
Vortex Mfg. Co.

STAFF LINERS
Weber Costello Company

STAGE CURTAINS, EQUIPMENT, AND SCENERY
Acme Scenic Studios
Electrical Equipment Co., The
Novelty Scenic Studios
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Volland Scenic Studios
Weiss & Sons, I.

STAINS
Johnson & Son, S. C.

STAIR TREADS
Alberene Stone Company
American Abrasive Metals Co.
Norton Company
Sanymetal Products Company

STATIONERY CABINETS (STEEL)
Durabilt Steel Locker Co.

STEEL JOISTS
Truscon Steel Company

STEEL LOCKERS
Berger Manufacturing Co.
Durabilt Steel Locker Co.
Lyon Metal Products Co.
Narragansett Machine Co.

STEEL STORAGE CABINETS
Berger Mfg. Co.
Durabilt Steel Locker Co.
Lyon Metal Products, Inc.

STEEL WINDOWS
Detroit Steel Products Corporation
Truscon Steel Company

STOOLS—STEEL ADJUSTABLE
Royal Metal Mfg. Company

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RCA Victor Corporation

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Natl. Association of Teacher Agencies
Teacher Agencies Directory

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TECHNICAL PAINTS
Sonneborn Sons, L.

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Automatic Electric Company
Graybar Electric Co., Inc.
International Business Machines Corp.
North Electric Mfg. Company, The
Standard Electric Time Company

TEMPERATURE REGULATION
Johnson Service Company

TENNIS NETS
American Wire Fence Company

TOILET PAPER AND FIXTURES
A. P. W. Paper Company

TOILET PARTITIONS
Clow & Sons, James B.
Sanymetal Products Company

TOOL CABINETS
Sheldon & Company, E. H.

TOOL CABINETS (STEEL)
Durabilt Steel Locker Co.

TOWELS
A. P. W. Paper Company
Brown Company

TYPEWRITERS
Remington-Rand Business Service, Inc.
Underwood Typewriter Company

VACUUM CLEANING SYSTEMS
Spencer Turbine Company, The
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VACUUM PUMPS
Nash Engineering Company

VALVES—FITTINGS
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American Air Filter Co.
Buckeye Blower Company
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.
Sturtevant Company, B. F.

VENTILATORS
Sturtevant Company, B. F.

VISUAL INSTRUCTION EQUIPMENT
Keystone View Company

VOCATIONAL EQUIPMENT
Christiansen, C.
Columbia School Supply Co.
Kimball Company, W. W.
Richards-Wilcox Mfg. Co.
Sheldon & Company, E. H.
Wallace & Company, J. D.
Welch Mfg. Company, W. M.

WARDROBES
Austral Window Co.
Evans, W. L.
K-M Supply Company
Park, Winton & True Co.
Prose-Maco Mfg. Company
Richards-Wilcox Mfg. Company
Wilson Corp., Jas. G.

WARDROBE CABINETS—STEEL
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WASTE PAPER BASKETS
National Vulcanized Fibre Co.

WASTE RECEPTACLES
Solar-Sturges Mfg. Co.

WATER CLOSETS
Clow & Sons, James B.
Crane Co.
Vogel Co., Joseph A.

WATER COLORS
American Crayon Company

WATER PURIFIERS
Clow & Sons, Jas. B. (R. U. V.)
Wallace & Tiernan, Inc.

WATERPROOFING
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Truscon Steel Company

WAXING EQUIPMENT
Finnell System, Inc.
Johnson & Son, S. C.

WEATHERSTRIPS
Athey Company, The

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Detroit Steel Products Company
Kawneer Company, The
Truscon Steel Company
Universal Window Company
Williams Pivot Sash Company

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Columbia Mills, Inc.
Peerless Unit Ventilation Co., Inc.
Williams Pivot Sash Company

WINDOW GUARDS
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Stewart Iron Works Co., The

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Williams Pivot Sash Copmany

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WINDOW SHADE ROLLERS
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Safety Ladder
(*Patented*)

Be Sure They Bounce!

Unless *bouncing* workmen do the ladder-jobs around your building, don't expect efficiency if you're still using old-fashioned stepladders. It's mighty hard to find bouncers fitted to do the work you want. It's a whole lot easier to insure the safety of *ordinary* workmen by equipping them with Dayton Safety Ladders. Strong, steel-braced, *riskless*. Easy to carry. Made in sizes 3 to 16 feet. Moderately priced.

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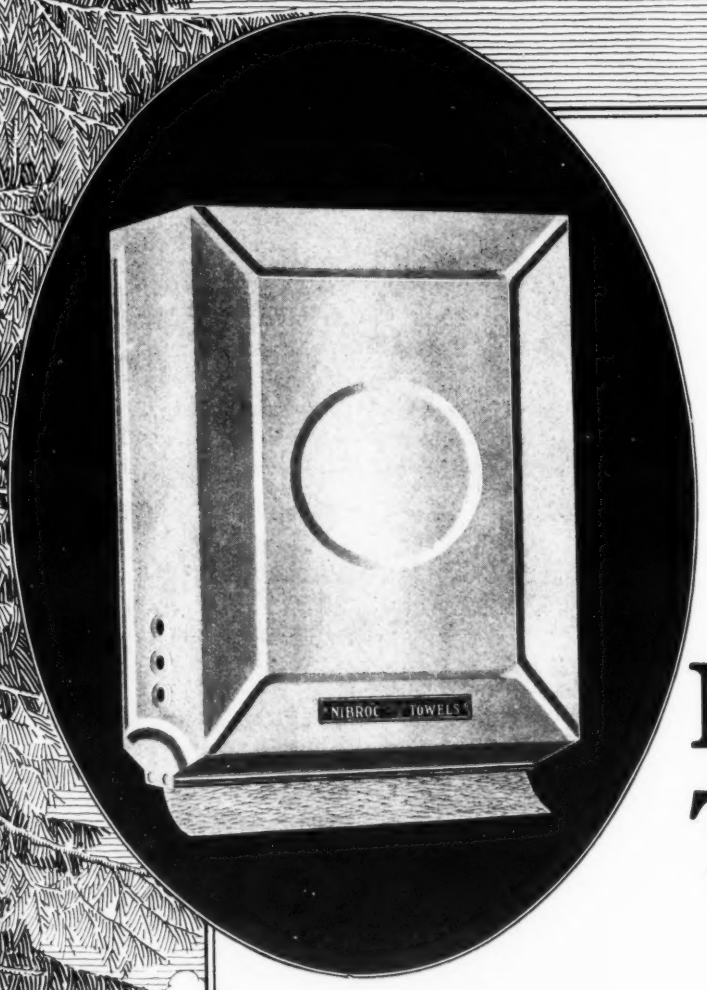
Peabody Seating Co., North Manchester, Ind.—School furniture.
Pepperell Braiding Co., East Pepperell, Mass.—Yarns.
Practical Drawing Co., 1315 South Michigan Ave., Chicago, Ill.—Art publishers.
Practical Home Economics, 468 Fourth Ave., New York, N. Y.—Periodical.
Public School Publishing Co., 509 North East St., Bloomington, Ill.—Educational publishers.
Quarrie & Co., W. F., 154 East Erie St., Chicago, Ill.—Maps and publishers.
Rand, McNally Co., 536 South Clark St., Chicago, Ill.—Educational publishers.
Rawlplug Co., Inc., 98 Lafayette St., New York, N. Y.—Fiber plugs.
R. C. A. Victor Co., Camden, N. J.—Radios and talking machines.
Readsboro Chair Co., Readsboro, Vt.—School furniture.
Remington-Rand, Inc., 564 Washington St., Buffalo, N. Y.—Library furniture and equipment.
Royal Metal Mfg. Co., 1138 South Michigan Ave., Chicago, Ill.—School furniture.
Sadlier, Inc., Wm. H., 11 Park Place, New York, N. Y.—Educational publishers.
Sanford Mfg., Co., 846 West Congress St., Chicago, Ill.—Ink and paste.
Schirmer, Inc., G., 3 East 43rd St., New York, N. Y.—Music publishers.
Scholastic Publishing Co., 923 Wabash Bldg., Pittsburgh, Pa.—Periodicals.
School Assembly Association, Inc., 1315 Kimball Bldg., Chicago, Ill.
Science Service, 2102 B St., N. W., Washington, D. C.
Sheldon Co., E. H., Muskegon, Mich.—Laboratory furniture.
Sherrick, J. L., Scottdale, Pa.
Silver, Burdett & Co., 39 Division St., Newark, N. J.—Educational publishers.
Singer Sewing Machine Co., 149 Broadway, New York, N. Y.—Sewing machines.
Sjostrom Co., John E., 1715 North Tenth St., Philadelphia, Pa.—Laboratory furniture.
Smith & Corona Typewriters, Inc., 701 West Washington St., Syracuse, N. Y.—Typewriters.
Southwestern Publishing Co., 1–3 West Third St., Cincinnati, Ohio.—Educational publishers.
Spalding & Bros., A. G., Chicopee, Mass.—Gymnasium equipment.
Spencer Lens Co., 19 Doat St., Buffalo, N. Y.—Scientific instruments.
Spencer Turbine Co., Station A, Hartford, Conn.—Vacuum cleaning.
Standard Crayon Mfg., Co., Danvers, Mass.—Crayons.
Standard Electric Time Co., 89 Logan St., Springfield, Mass.—Electric school programs.
Standard Mailing Machine Co., Everett, Mass.—Duplicators.
Starr Piano Co., Richmond, Ind.—Pianos.
Steel Furniture Co., 1480 Buchanan Ave., S. W., Grand Rapids, Mich.—School furniture and desks.
Tiffin Scenic Studios, Tiffin, Ohio—Stage equipment.
Twin City Scenic Co., 2310 Cass Ave., Detroit, Mich.—Stage equipment.
Underwood Typewriter Co., 342 Madison Ave., New York, N. Y.—Typewriters.
Universal Publishing Syndicate, 23rd and Allegheny Ave., Philadelphia, Pa.—Bookbinders.
University of Chicago Press, 5750 Ellis Ave., Hyde Park, Chicago, Ill.—Educational publishers.
University Publishing Co., 239 Fourth Ave., New York, N. Y.—Educational publishers.
Valleyco Co., Inc., 119 Sycamore St., Cincinnati, Ohio—Blackboards.
Vestal Chemical Co., 4963 Manchester Ave., St. Louis, Mo.—Cleaning materials.
Victor Animatograph Co., 537 West Fourth St., Davenport, Iowa.—Motion-picture apparatus.
Vonnegut Hardware Co., 120 East Washington St., Indianapolis, Ind.—Panic exit latches.
Wallace & Co., J. D., 134 South California Ave., Chicago, Ill.—Woodworking machines.
Walraven Book Cover Co., 1509 Caruth St., Dallas, Tex.—Book covers.
Ward Company, C. E., New London, Ohio.
Webster Publishing Co., 1808 Washington Ave., St. Louis, Mo.—Educational publishers.
Weber Costello Company, 12th and McKinley Sts., Chicago, Ill.—Globes, maps, and blackboards.
Webb Publishing Co., 700½ West Grand St., Oklahoma City, Okla.—Educational publishers.
Weis Mfg. Co., 941 Oak St., Elkhart, Ind.—Metal toilet partitions.
Welch Mfg. Co., 1515 Sedgwick St., Chicago, Ill.—Scientific apparatus.
West Disinfecting Co., 16 Barn St., Long Island, New York, N. Y.—Sanitary materials.
Western Rubber Stamp Co., 224 Helena Ave., Santa Barbara, Calif.
Wetmore Declamation Bureau, 1304 South Newton Ave., Sioux City, Iowa.
Wheeler Publishing So., 2831 South Park Way, Chicago, Ill.—Educational publishers.
White Sewing Machine Co., Main and Elm Sts., Cleveland, Ohio—Sewing machines.
Williams Pivot Co., 37th and Perkins Ave., Cleveland, Ohio—Window equipment.
Willsie Co., Paul A., 1349 East Milwaukee Ave., Detroit, Mich.
Wilson Magazine Co., 1955 Massachusetts Ave., Cambridge, Mass.
Wilson Publishing Co., 950 University Ave., New York, N. Y.—Educational publishers.
Winston Co., J. C., 1006 Arch St., Philadelphia, Pa.—Educational publishers.
World Book Co., 313 Park Hill Ave., Yonkers, N. Y.—Educational publishers.
Wright Engraving Company, 2545 North Broad St., Philadelphia, Pa.—Diplomas.
Yawman & Erbe Mfg., Co., 1099 Jay St., Rochester, N. Y.—Filing equipment.
York Band Instrument Co., 1600 South Division Ave., Grand Rapids, Mich.—Band instruments.
Zaner-Bloser Co., 612 North Park St., Columbus, Ohio—Penmanship publishers.



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and
Economize
with

NIBROC TOWELS

ONLY with the strict observance of sanitary conditions in your school washrooms and classrooms can good student health be maintained. The installation of NIBROC Towels in your schools will protect the health standards of your community. ¶Unlike a cloth towel that is used repeatedly, NIBROCS are served fresh and clean, *used once* and quickly disposed of. NIBROCS excel in strength, purity, and absorption. They are emollient and free from lint. Economical too—a single 10″ x 15″ sheet will dry the wettest pair of hands *thoroughly*. No need of doubling NIBROCS to prevent disintegration. ¶You have a choice of *golden brown* or *pure white* NIBROCS, of equal quality. Send for generous free supply of NIBROCS today, at our expense. Compare and test them with other makes. NIBROCS will convince you on merit alone.

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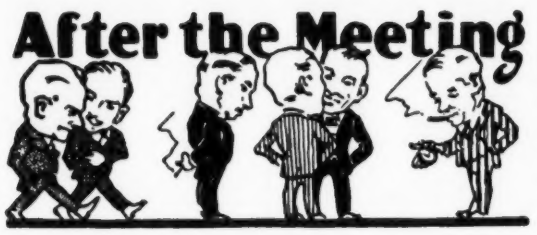


Not so Bad

The following letter was received by a fifth-grade teacher in Charleston, Ill., in response to a request for a statement of what each child hoped to be when he or she grew up. The writer of the letter is an over-age child who is considered inferior mentally, but the teacher and the superintendent, Mr. U. B. Jeffries, feel that the boy may not be so slow after all.

Charleston, Illinois,
October 24, 1930.

Dear Miss ————

I wood like to have a job being geneter a while then I want to be supertenet then I can run the holl school and the teacher with it then I wood be seting preety for a while.

Yours truly,

————.

During Recess

The London, England, newspapers have recently carried the following story from Mercaba, in South India:

"In one morning the schoolmaster caned 183 boys who had quit their work and gone on a strike. Reaching their homes the boys complained to their parents but most of their father and mothers gave them a second walloping.

"Two of the boys went to hospitals desiring to be treated, but the surgeon gave them another caning, it was alleged, and sent them away. No more schoolboy strikes are expected at Mecaba, it is naively added."

PREPARING TO SEW HIM IN

"Miss ————.

Please excuse John for being absent yesterday from school cause I was washing his winter underwear and it won't happen again this year.

Mrs. ————."

—Journal of A.M.A.

CORRECT!

A story is told of a young Polish girl in a New York school who was asked to write the difference between an educated man and an intelligent man. She summed it up thus: "An educated man gets his thinks from some one else; an intelligent man works his own thinks." — *Exchange.*

The Baffling Business Man

Arnold Bennett, in his Journal tells an interesting story about a lunch with a business man that contains a point for school administrators. He writes:

"Men of business are baffling creatures. I invited to lunch at a grillroom a prominent business man, because I wanted to straighten out certain obscure matters. A man accustomed to think in millions — other people's millions! He arrived a few minutes late, saying that he was excessively busy and had enough work to occupy two men. We drank cocktails. We then lunched — excellently. From time to time he repeated that he was an excessively busy man. We talked small talk, about everything except our joint business. Again and again I led him gently to the brink of our business, but he could not persuade himself to plunge. Possibly the water looked too chilly. At three o'clock we were still conversing at large. At three-fifteen I said to myself: 'When does this fellow intend to go?' At three-thirty I said to myself: 'This fellow will just *have* to go soon.' At nearly four o'clock I said to him: 'I'm very sorry, but I must go.' 'So must I,' said he. He went. And I doubt not that during the rest of the day and during all succeeding days, he would be assuring people that he was an excessively busy man. As for me, I had wasted two hours and a half of life's brief span, and about a couple of pounds."

Bright!

cher: "Johnny, name a collective noun."

ny: "A vacuum cleaner."

BUYERS NEWS

PERSONAL NEWS

George Helms Passes Away. George A. Helms, who was for the past eight years manager of the High School and College Department of the John C. Winston Company, Philadelphia, passed away suddenly on January 5, at his home in Wayne, following an attack of heart disease.

Mr. Helms, who was 52 years of age, was a graduate of Columbia University, and had been associated with educational publishers for thirty years. In the field of education, he had numerous friends in every section of the country, who will miss his warm friendship and genial personality. Mr. Helms is survived by his widow and four children.

Mr. Spillman Joins Gregg Company. Mr. Harry Collins Spillman has recently become director of educational service for the Gregg Publishing Company. Mr. Spillman, who enjoys a reputation as an author, educator, and speaker, has appeared before a number of educational audiences in the United States, and has organized a successful speaking tour of Europe, Asia, and Africa. He will be available for addresses before schools and colleges as a feature of Gregg service.

MR. HARRY COLLINS SPILLMAN
Director of Educational Service for the Gregg Publishing Co., New York, N. Y.

TRADE PUBLICATIONS

Cellized Oak Flooring for Schools. The E. L. Bruce Company, of Memphis, Tenn., has just issued an interesting booklet describing and illustrating the uses of cellized flooring in schools. Solid oak flooring is being brought into a modern environment. It conforms to decorative treatments in the direction of workmanship, and is particularly suitable in offices and board rooms, because of its character, warmth, and ease of maintenance. The booklet brings out a number of new and interesting floor treatments which tend to emphasize the warmth, natural beauty, strength, and adaptability of oak flooring.

The company has also issued a very useful set of standard specifications for oak flooring, which is suitable for architects who are faced with the problem of flooring for schoolrooms and offices. It contains instructions for waterproofing, for laying wood flooring, and includes provisions for a schedule of floor areas and grades of block.

Complete information may be obtained by writing the Bruce Company at Memphis, Tenn.

Struco Slate Review for 1930. The Structural Slate Company, of Pen Argyl, Pa., manufacturers of slate products, has just issued the fifth edition of its Struco Slate Review for the year 1930. The publication illustrates and describes the various uses for slate in building construction. It illustrates particularly the enduring and beautifying features of slate when used for blackboards, toilets, window sills, and interior finish.

Complete information regarding new interior finishes may be obtained by writing to the Structural Slate Company, at Pen Argyl, Pa.

Western Electric Educational Talking Pictures. The educational department of the Western Electric Company, 50 Church St., New York City, has just issued a new catalog entitled "A New Force in Modern Education," which outlines a threefold plan for an educational talking-picture department, for the promotion of talking pictures in education. The plan calls for three types of work: (1) research for the determination of material to be presented; (2) the production of pictures; and (3) the installation and maintenance of sound-system equipment in schools and educational institutions.

The educational department lists a number of industrial pictures which are available for use in the schools and may be obtained at a small charge covering the bare cost of transportation.

School authorities desiring detailed information on Western Electric sound systems should write to the Department of Educational Talking Pictures, Electrical Research Products, Inc., 250 West 57th St., New York, N. Y.

TRADE PRODUCTS

Sturtevant Filticooler. The B. F. Sturtevant Company, of Hyde Park, Boston, Mass., has just issued an illustrated circular, dealing with their new Filticooler, a new device for air-washing and air-conditioning units. The Filticooler is designed primarily to filter and cool the air passing through, and has a universal application wherever cool, filtered air can be used.

With a Filticooler, no bulky air washer is necessary, because the device will do the same amount of work and requires only one half of the amount of space. The device is equipped with automatic controlling devices, and all parts are accessible for repairs and alterations.

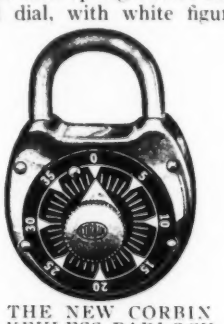
School officials and architects may obtain a copy of Bulletin No. 378, by writing to the Sturtevant Company, at Hyde Park, Boston, Mass.

New Holophane Lighting Fixture. The Holophane Company, Inc., of 342 Madison Ave., New York City, manufacturers of lighting fixtures, have announced a new fixture called Holophane Realite R-500, for use in school administration offices, libraries and reading rooms, and small assembly rooms and similar locations, where total indirect illumination is desirable, and where conditions make a light-colored ceiling light practicable.

The Realite R-500 is totally indirect, ornamental, and dust-resisting. It throws a wide, soft light on the ceiling, gives a smooth appearance to the entire room, and is shadowless at the work level. The lamp is entirely inclosed in a glass refractor, which makes easy maintenance possible. All visible parts are made of dull aluminum.

Complete information and prices may be obtained by any school official, or architect, upon request.

New Corbin Keyless Padlock. The Corbin Lock Company, of Chicago and New York, has just announced the marketing of its new "combination" padlock for lockers, etc. The padlock, which is of steel or brass, in nickel-plated or plain finish, is made with a heavy wrought-steel spring-swivel shackle. It has a brass knob and dial, with white figures on a black background. The padlock holds its combination when in an unlocked position, but when locked, it automatically throws off the combination.



THE NEW CORBIN
KEYLESS PADLOCK

Complete information and prices may be obtained by any school official, or architect, upon request.

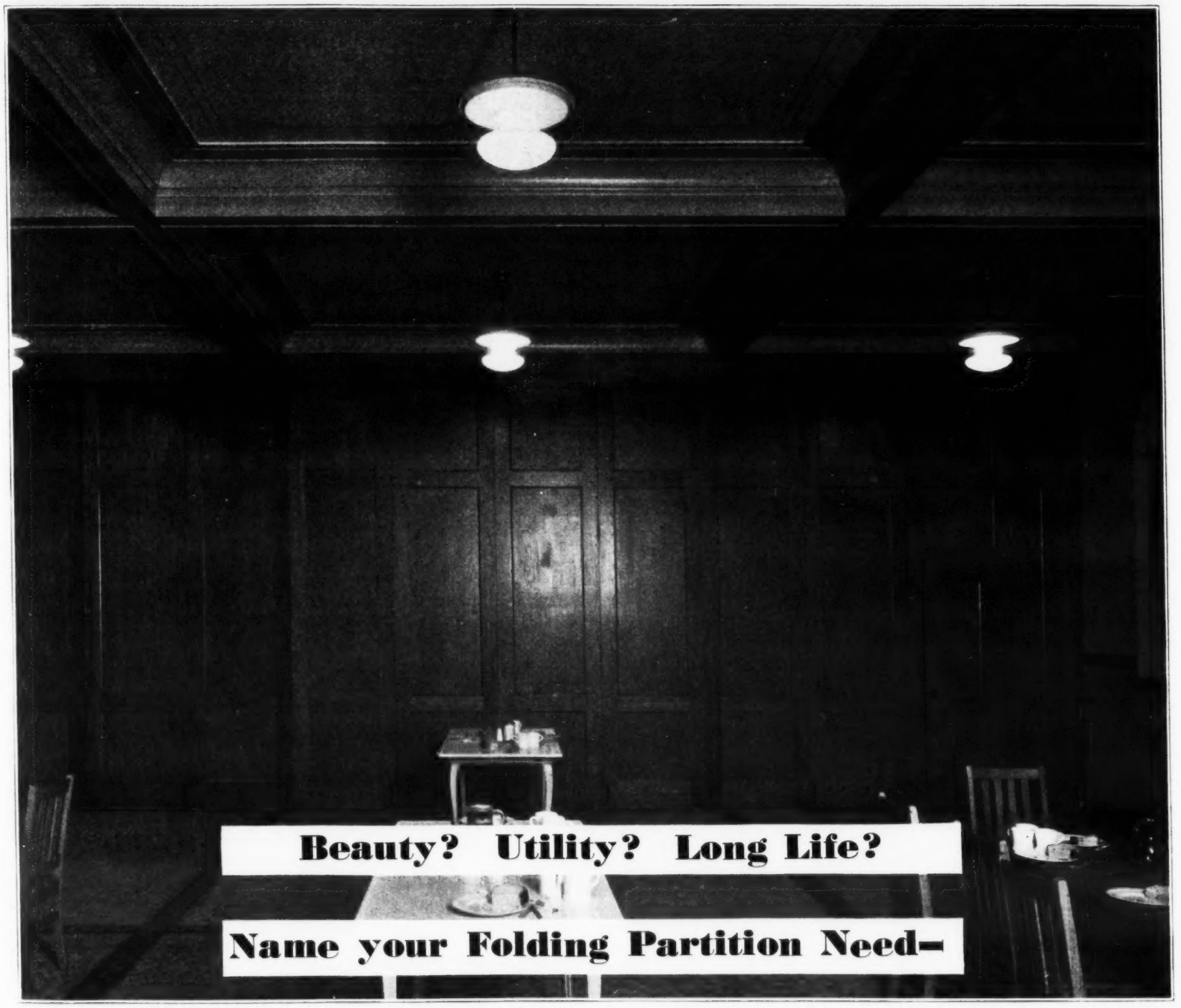
Crane Angle-Stream, Non-Squirting Bubblers. The Crane Company, of Chicago, Ill., manufacturers of Crane plumbing products, has just announced a new sanitary line of drinking fountains of the non-squirting type, which are especially suitable for schools. The firm has issued a small pamphlet, illustrating and describing the Crane raised integral, angle-stream, non-squirting bubbler, the Tyron drinking fountain with angle-stream, non-squirting bubbler and stream regulator, of the pedestal type, and the creta drinking fountain in the wall type. The firm manufactures a wide variety of bubbling fountains in the wall and pedestal types which are suitable for school use because of their sanitary features.

Complete information may be obtained by writing to the Crane Company at 836 South Michigan Ave., Chicago, Ill.

A CORRECTION

The Floral Park-Bellerose School, at Floral Park, L. I., New York City, was designed and erected under the supervision of Architect Edward Hahn, of Hempstead, N. Y. The construction work was carried out by the contracting firm of James McCullagh & Company, of Hicksville, L. I., New York.

The school which was illustrated in the January advertisement of the Peerless Unit Ventilator Company, was incorrectly credited to another architect and other heating contractors.



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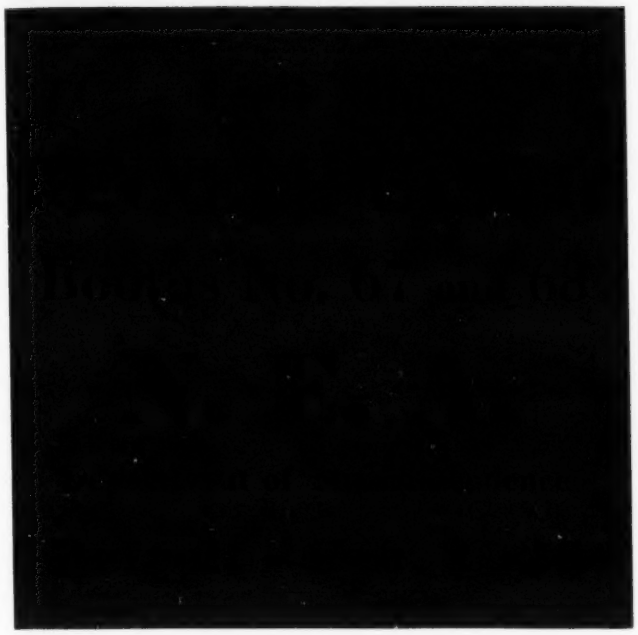

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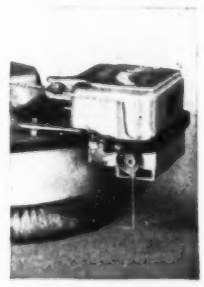

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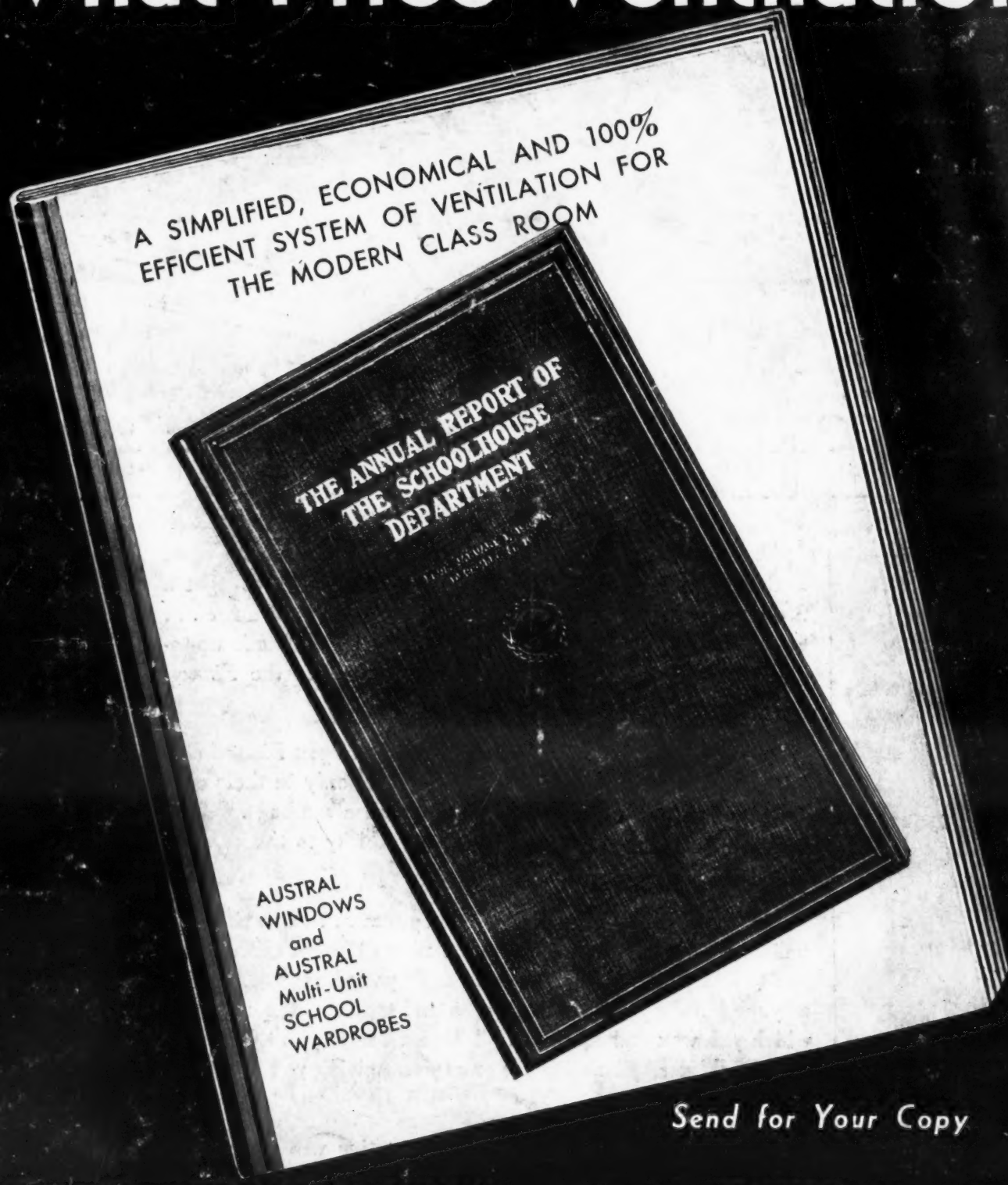
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